MONTHLY INTERNATIONAL FEATURE ISSUE

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The OIL WEEKLY

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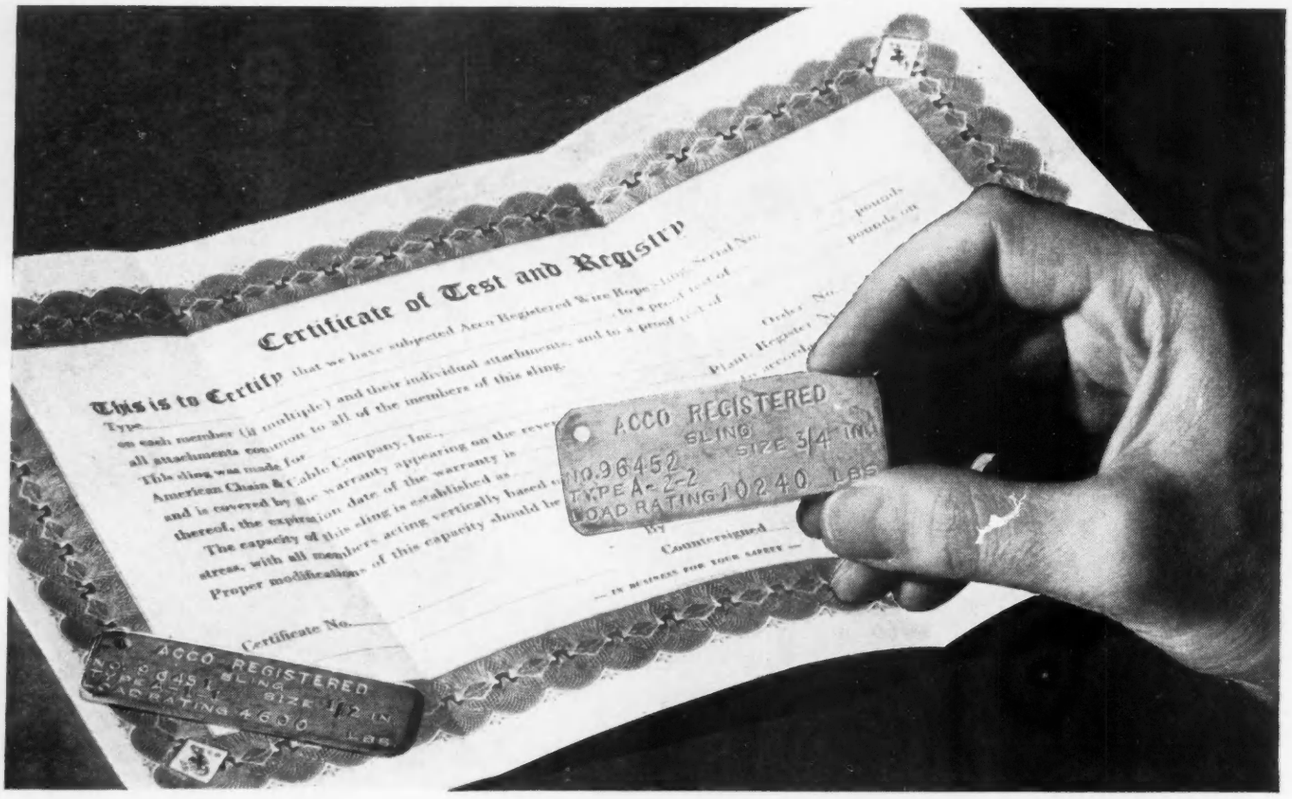

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Looking Ahead

WITH THE EDITOR

DURING the war years oil tool manufacturers were busy making the tools for combat, but their designers were thinking up new ideas for postwar oil field equipment. Changes in design, increased efficiency, construction and operation of machinery are making their appearance with greater frequency since V-E Day. One of the most significant trends in drilling equipment design has been towards pneumatic and hydraulic controls. New power rigs equipped with either gas-gasoline or diesel engines are being made to furnish greater horsepower with accompanying compounding and transmission units of more intricate design.

With greater unitization, the transportation problem becomes of less concern. This same factor materially reduces time required to set up and dismantle drilling equipment, thus saving considerable expense. Efficiency of operation has also been increased in late rig designs due in part to developments in machinery during the war. All of these factors have combined to make a complicated machine of the drilling rig.

Characteristic of this trend in design is a rig recently placed in operation by Crow Drilling Company of Shreveport. Details have been described by J. E. Kastrop, staff writer, in "New Power Rig," to appear in THE OIL WEEKLY, next week.

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Wartime Cry Revived: Iron Scrap Needed!

THE oil industry, like many another, would find the sledding extremely tough if, for any reason, steel production is further curtailed. For that reason, more than ordinary heed should be given the plea of the Civilian Production Administration to "institute immediately a survey of all properties for sources of scrap iron and steel, to arrange for its immediate collection and move it into material supply lines." The attention and interest of *company executives* in this imperative drive is badly needed, J. D. Small, CPA head.

Inventories of iron and steel scrap have reached dangerously low levels and unless increased supplies are forthcoming promptly, there is imminent danger of open-hearth furnaces being taken off. In fact Washington advised THE OIL WEEKLY last week that such furnaces already were being taken off, "this at a time when we can ill afford any further interruption of steel production."

The petroleum industry has always been a dependable source of scrap and Ol' Reliable is being beckoned again in this crisis. With so much at stake, it's a safe bet that bosses from top-flight executives on down will take the steps needed to meet this call.

A lot of us think that the military branches, by half-trying, could round up plenty of iron and steel scrap. And it may be that scrap prices as set by OPA are to blame for the shortage. Washington doubtless is weighing the merits of these angles. In the meantime, the oil industry should do its utmost and deliver its full collection of scrap just as it did in the war days.

* * *

The evidence is clear that people will fare better under an economy based on the fair competition of free people than under any other yet devised.

—F. W. ABRAMS,
Chairman of the Board,
Standard Oil Company
(New Jersey)

Oil's Determination for Adequate Research

IN MENTIONING the gas turbine locomotive powered by pulverized coal, a development of the coal industry's $500,000 research program, THE OIL WEEKLY on July 22 remarked that "any number of oil companies are spending several times this amount annually on research."

In an effort to get some definite figure on the matter, we inquired of several sources and this interesting reply comes from the Independent Natural Gas Association of America:

"It is our understanding the American Gas Association has spent $1 million a year for three years on their research program and $500,000 a year in their testing laboratory. The Institute of Gas Technology, Chicago, spends approximately $500,000 a year. Private companies spend varying amounts of money, which probably run from $2 to $2½ million a year."

The $2 to $2½-million estimate, THE OIL WEEKLY believes, is a most conservative estimate if it includes the vast research programs announced by oil companies when, after V-J day, many were able to turn their eyes from winning the war to detail of aiding themselves and their own industry.

Then, too, it does not embrace activities of various industry associations which are aggressively seeking improved methods. A recent case in point is the American Association of Oilwell Drilling Contractors which has made a grant from its research fund to the University of Texas to further the Association's mud research program. Uses and control of drilling fluids will be covered in the courses such as John Woodruff describes, page 30 this issue.

Directors of this Association also voted in July to continue the research program started a year ago to study drill-stem performance. Under this arrangement, Battelle Memorial Institute, Columbus, Ohio, will continue as the medium through which this research work will be extended and, the Association announces, "the program will be broadened considerably."

Pennsylvania Grade Crude Oil Association, among other groups, finances a highly efficient and research program.

Thus it is evident that the oil industry would overlook no bets in protecting their future interests. Also it should be remembered that any oil industry improvement redounds not only to the benefit of the operator who might discover it, but to peoples generally. A bountiful supply of petroleum and its products is that closely tied up with the world's economy.

Costs How Much?

ABANDONMENT of the old Yankee custom of being guided by the answer to the question, "how much does it cost?" doubtless has been a factor in running up our huge national debt.

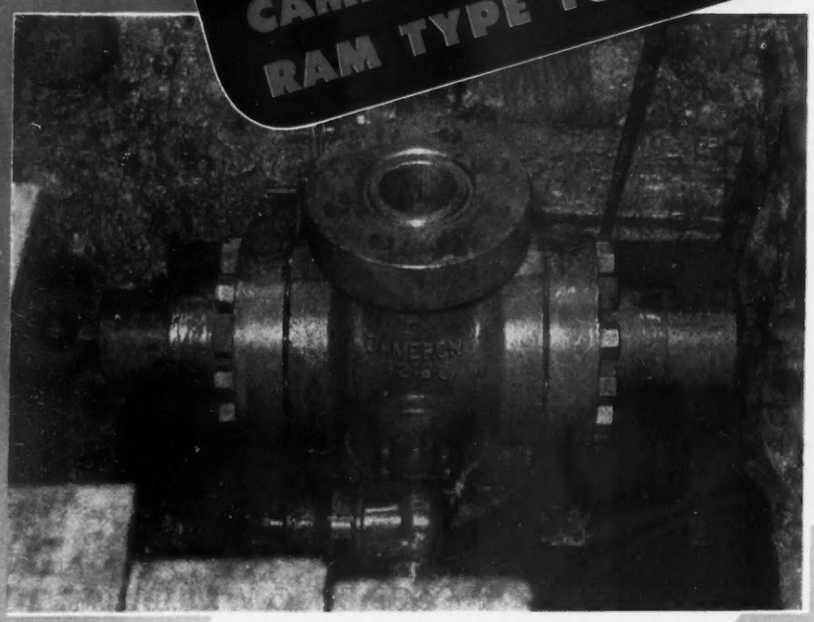
Congressman Jenkins of Ohio recently figured OPA's cost as follows: Total losses and direct subsidies paid by RFC, $3,369,643,000; losses on price-support programs and subsidies paid by the CCC, $2,186,950,000; and administrative expenditures by the OPA, $650,575,884. This totals $6,207,168,884.

To these direct costs of OPA, billions were paid by Americans for inferior merchandise at ceiling prices, black market overcharges and cost of higher priced alternatives after standard brands had been driven off the market.

"How much does it cost?" our Yankee forebears used to ask. The question, with pointed emphasis, should be directed more frequently by today's voters at Washington as it continues to substitute political expediency and opportunism for sound thinking and the recognized laws of economics.

THESE High TUBING PRESSURES

on wells completed recently with Cameron Xmas Trees point to the sound design of CAMERON 15,000 LBS. TEST RAM TYPE TUBING HEADS



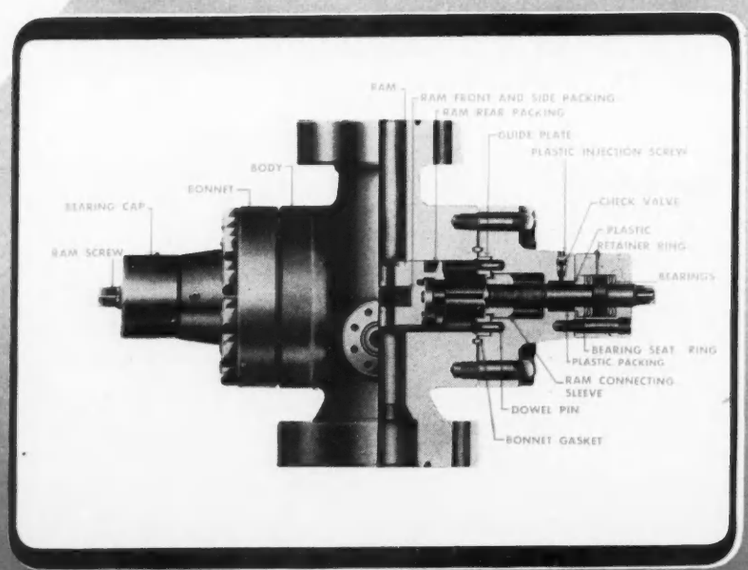
Above—from top to bottom—Irby No. 1, Berclair Field, South Texas, 6775 lbs.; Holland No. 1, Blue Lake Field, South Texas, 7900 lbs.; Elizabeth Regan No. 3, Egan Field, South Louisiana, 8000 lbs.

Left—A Cameron 15,000 lb. test ram type tubing head installed on a high pressure wildcat prior to final completion operations.

Below—Cross-section view of a Cameron 15,000 lb. test ram type tubing head, illustrating its rugged design and ram construction.

As shown in the cut-away view at right, Cameron 15,000 lb. test ram type tubing heads incorporate all of the mechanical features of lower pressure ram type heads which have brought Cameron preeminence in the well completion field.

Tubing may be suspended and sealed from a hanger nipple on the closed rams, utilizing the Cameron closed pressure method of completion, or tubing may be suspended from a threaded connection in a hanger flange installed above the tubing head. In the latter method, the rams of the tubing head serve as a packoff or stuffing box so that the tubing may be safely worked under pressure for washing-in and packer setting operations. The patented self-feeding ram packing obviates the need for a polished joint. An ordinary joint of tubing can be easily worked through the closed rams. The rams also provide an additional tubing seal.



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The Week's News

Record Runs to Stills—A new high was recorded during the week of July 27 when the daily crude runs to U. S. stills averaged 4,896,000 barrels. Page 38.

Dent in Pemex?—Bids have been invited from private companies for oil exploration rights in the Mexican state of Sinola. A change in policy may thus be indicated. Page 33.

Big Inch Bids—It will take WAA several weeks to analyze offers made by private companies and others for the Big Inch lines. A variety of proposals were outlined and methods of financing showed a wide range. Page 13.

Natural Gas Hearing—Federal Power Commission is preparing to close down the series of natural gas hearings which have been in progress, off and on, for almost a year. Story below.

Demand Increase Seen—A slightly increased demand for domestic crude is foreseen in the Bureau of Mines estimate to be issued this week. Page 13.

IPAA Meeting—Imports, heavy storage, taxes are problems that now will engage IPAA, it was emphasized at meeting in Cheyenne. Page 12.

Tidelands Measure Vetoed—President Truman's veto of the tidelands title measure means that the Supreme Court will pass on the question as Harold Ickes has desired. Story below.

Oil Prices Increased—Upward revisions for crude oil and products had spread throughout the country by August 1. Page 10.

War Measures Repealed—The House provided repeal legislation which would wipe 46 of the more than 400 emergency laws off the books, including the Cole Pipe Line and O'Mahoney 12½ percent royalty acts.

Gas Industry Witnesses Cross-Examined As FPC Prepares to Close Hearing

Hearings in the Federal Power Commission's natural gas investigation slowed down last week as the Commission prepared to close them following lengthy cross-examination of gas industry committee witnesses and presentation of additional factual evidence by coal and state interests, including material prepared by Louisiana state authorities to rebut the assertion that deeper drilling resulted in the finding of a larger ratio of gas to oil.

The greater part of the week was spent by counsel for the coal and railroad interests in attempting to break down the testimony of industry witnesses and commission counsel in developing facts which they have submitted. E. Holley Poe, consultant for the natural gas industry, was back on the stand again.

"Prior to and in the early stages of the natural gas investigation, I entertained the very definite opinion that some members of the Commission desired an extension and enlargement of regulatory powers over the natural gas industry," Poe said. "I was opposed, and I am still opposed, to such an extension of power. My original impressions concerning the Commission's attitude were largely based on inferences drawn by me from expressions in various Commission opinions and in reports to the Congress.

"I think I made it clear in my original testimony, that I felt that this investigation had been constructive. I reiterate that statemen. Some of my early impressions in this respect, have been revised."

Under questioning by Burton N. Behling, chief of the Commission's investigation staff, Poe explained the industry accepted the Natural Gas Act as a "necessity" but did not expect it would result in the imposition of unnecessary and delaying burdens. The industry's perturbation when the gas investigation was first announced, he said, was because of the time it was called—during the war; because of statements of the Commission in reports made to Congress, certain opinions issued by the Commission, and the broad scope of the investigation program, which appeared to include many sociological problems.

Restrictions Suggested

During the course of its hearings, spread over many months, the Commission received the view of state authorities, industrial and other consumers, the coal and railroad industries and organized labor on the question of regulating the uses to which natural gas should be put. Taking the position that since the supply of natural gas is, of necessity, limited and will be exhausted within a relatively short period if unrestricted exploitation of reserves is permitted, the industrial, railroad and labor group suggested arbitrary restrictions on gas, although in the case of the coal and railroad industries and their labor it was brought out that their primary objective was protection of their present economic position.

Even while they urged artificial limitations upon the use of gas, spokesmen for the coal industry admitted they were undertaking a broad research program to improve the efficiency of coal while the railroads were shown to be going to the use of diesel fuel in a big way because of its advantages over coal.

In contrast with the appeals of the coal and railroad industries for government assistant in saving their coal business, witnesses for the natural gas industry pointed out that it, too, suffers from the competition of a competing fuel, electricity, but considered it merely a logical development and sought to combat it in the consuming markets without asking for federal assistance.

It was also brought out that the public had a definite stake in the regulation of fuels according to their uses, and that power rates in many sections of the country would have to be raised if the power companies were required to convert their generating plants from natural gas to coal. That the industrial use of gas generally is a dominating factor was admitted by Commission counsel, who disclosed that his study showed 1696 large industrial customers took 59 percent of all the gas sold in 1944.

Much of the effort of the coal, railroad and labor groups to make a showing was seen as due to fears that the Big Inch pipe lines would be converted to natural gas service, although Charles R. Bellamy, consulting engineer, testified that natural gas selling for 25 cents per MCF at the New York City gate could not begin to compete with coal at present prices for steam generation plants.

However, Bellamy indicated, natural gas could take over the domestic market, and he expressed the belief that domestic rates for gas will decrease in the next ten years because research now underway will cause industrial rates to increase.

Stripper-Well Subsidies At Same Rate for Awhile

Continuation of the stripper-wells subsidy at its former rates on July production, at least, was assured by a directive issued by Reconversion Director John R. Steelman to RFC.

However, Steelman said, the RFC and OPA are now drafting new regulations providing for continuation of subsidy payments after August 1, but he did not indicate whether any changes were likely.

Continuation of the subsidy payments until next April 1 was specifically provided for in the price control extension bill.

Court to Pass on Vetoed Tidelands Title Question

Declaring that the question of tidelands ownership presents a vital problem and Congress is not an appropriate forum for its determination President Truman last week vetoed legislation renouncing all federal claims to title, paving the way for consideration by the Supreme Court of the suit filed by the Department of Justice.

The House, which passed the meas-

ure by a vote of 188 to 67, sustained the veto 139 to 95.

Truman thus threw his support behind the Department of Justice, settling another subject of speculation—whether he would back up his own instructions to the department at the cost of possible offense to Edwin W. Pauley, whose support of the legislation was a matter of discussions during hearings on his nomination to be Under Secretary of the Navy, or ignore Pauley and support the department, thereby giving satisfaction to former Interior Secretary Harold L. Ickes, whose 1937 reversal of position on the question of tideland leases precipitated the controversy. Ickes' successor, Secretary J. A. Krug, also had urged the President to veto the measure.

There was comment in Washington that in his veto message, Truman defined the issue as one of oil, rather than state attempts to protect harbor and other coastal installations.

Atlantic Sells Properties

Shallow Water Refining Company of Shallow Water, Kansas, has acquired acreage, production and equipment of The Atlantic Refining Company, including 20 oil wells and one gas well as well as approximately 10,000 acres, for a consideration reported at $500,000. Properties are located in Scott and Finney counties, Kansas.

The company now hopes to maintain a maximum throughput of 2500 barrels daily at its refinery.

New Mexico Sale

Ten thousand acres for oil and gas leases will be offered August 10 in the office of the Commissioner of Public Lands at Santa Fe, N. M. One special 415-acre tract in the Bottomless Lakes area in Chaves County is included and other tracts are in DeBaca, Eddy, Lea, Roosevelt and San Juan counties.

Industry-Wide Revision of Petroleum Prices Follows Passage of OPA Bill

Prices of crude oil and petroleum products are now up generally throughout the United States to the higher levels long since demanded by increased costs of operations in all branches of the industry.

Industry-wide revisions were virtually completed when California crude and product prices were increased as of August 1.

The revisions on the Pacific Coast, initiated by Standard Oil Company of California, raised crude prices 10 to 30 cents a barrel and natural gasoline an average of 1 cent a gallon. Prices of all gasolines, kerosine, thinners, solvents, and liquefied gases were advanced 1 cent a gallon, and some other products were likewise advanced, with further slight increases for some inland areas to cover the cost of higher freight rates recently authorized by federal and state governments. Industrial fuel oil prices were unchanged.

Standard of California cited higher crude production costs heretofore almost totally absorbed by oil producers because of OPA regulations.

Oil industry price revision was initiated when Texas-New Mexico crudes were raised an average of 25 cents a barrel as of July 25, Humble Oil & Refining Company announcing changes within an hour after the OPA extension act was signed into law, exempting oils from control at least until August 20. Other purchasers east of California quickly followed with similar increases, and wholesale and retail prices of gasoline and other products have been generally advanced.

O. C. Schorp, president of The Carter Oil Company, declared that higher crude postings were necessary to preserve the economic health of the various oil companies.

H. C. Wiess, president of Humble, said advances took into account the great increase in costs which has occurred since 1941.

The increases which have occurred in crude prices are approximately the same that industry committees sought in vain to get authorized by the OPA, following exhaustive studies that thoroughly justified such revision.

OPA Plans

On the other hand, it now is known that in spite of repeated promises of decontrolling oil, OPA had no intention of relinquishing control for at least 9 more months. This was revealed by the head of the agency in conceding that the congressional appropriation for OPA operation now could be trimmed by the amount that would have been needed to control petroleum 9 months longer, as originally taken into account in estimates of OPA operating costs.

While the shadow of OPA still hangs over the industry, prices will be legally and definitely free until August 20. Then prices of crude and products could be re-controlled only by authority of the 3-man decontrol board, on a finding of unreasonable rises in crude or product prices, of short supply, or of need for regulation in the public interest.

Following the new increases averaging about 25 cents a barrel and the April 1 raise of 10 cents, the average price of crude oil in the United States now is approximately $1.57 per barrel. This is 28.7 percent more than the average of $1.22 per barrel which prevailed in both 1944 and 1945. It is 37.7 percent more than the 1941 average of $1.14. However, the present $1.57 average price is only approximately one half of the $3.07 average of 1920 which was the peak reached after World War I. It is substantially less than in a year as recent as 1926, when the average was $1.88 per barrel, but is the highest average since that period 20 years ago. After 1926 came many rich oil field discoveries and abundance of oil that held crude prices down. In all the history of the industry, covering nearly 90 years, the national average price of crude oil has been approximately $1.18 per barrel.

Stripper Provisions

The OPA extension law provides for continuation of the stripper well subsidies until next April 1 at rates not exceeding those heretofore. However, thousands of stripper well owners throughout the country, through their organization the National Oil Conservation Committee, are seeking continuation of subsidies until Congress authorizes permanent "conservation payments" to marginal producers.

A policy of quick elimination of all vestiges of price control was laid down last week at Washington by Roy L. Thompson, chairman of the new three-man decontrol board provided for in the price control extension measure.

While OPA will henceforth watch closely the movement of petroleum prices, officials of that agency have indicated they do not expect the oil industry to allow the price situation to get out of hand. They have admitted that crude increases were necessary, and if product prices are not boosted beyond the amounts made inevitable by higher crude costs, there will be nothing for the price agency to attack.

In order to have a "basis for judging price trends," OPA has ordered all manufacturers of drilling and producing machinery and equipment who formerly filed list prices with the agency to continue to notify it whenever a price is changed.

Schedules follow. (See also the opposite page.)

MICHIGAN PRICES

Central (Basin):		
Mt. Pleasant, Porter, Greendale, Crystal, Fork, Wise, Midland, Vernon, Saginaw	$1.79	7-25-46
Rose Lake, Ashton, Headquarters, Woodville	1.83	7-25-46
Reed City and Evart	1.74	7-25-46
Adams and Deep River	1.62	7-25-46
Southwest (Shallow):		
Traverse, crude in Allegan, Kent, Ottawa, Van Buren Cos. (incl. Bloomingdale, Grand Rapids)	1.80	7-25-46

MIDDLE WEST PRICES

Lima, Ohio-Ind	$1.85	7-25-46
Illnois Basin	1.72	7-25-46
Eastern Ill.-Western Ind. (Ohio Oil Co.)	1.57	7-25-46
Plymouth, Illinois	1.50	7-25-46
Western Kentucky	1.72	7-25-46
Birk City, Western Kentucky	1.72	7-25-46
Cleveland, Lodi, Chatham, Ohio	1.66	7-25-46

ROCKY MOUNTAIN STATES PRICES

Montana:		
Dry Creek	$1.37	7-25-46
Wyoming:		
Medicine Bow	1.825	7-25-46

Gravity-Scale Crude Oil Prices in Mid-Conti nent, Rocky Mountain, and Gulf Coast Fields

Postings Effective Generally as of July 25, 1946

(DOLLARS PER BARREL)

GRAVITY	Okla.-Kans. Rky. Mt.		Inland Texas and New Mexico					Louisiana and Arkansas								Texas Gulf Coast and Southwest Texas				
	[1]Oklahoma-Kansas and Rky. Mt. Light	[2]Rky Mt. Heavy	[3]North & N. Central Texas and Texas Panhandle	[4]West Texas and S.E. New Mexico	[5]East Central Texas	[6]East Texas Border and Other E. Texas	[7]Hawkins, Talco. etc., E. Texas	[8]North La.-Ark. Sweet and Jennings, Louisiana	[9]North La.-Ark. Sandstone	[10]North La.; Catahoula Lake, etc.	[11]Arkansas Limestone	[12]Central and Coastal La.	[13]Central and South La.	[14]Louisiana Gulf Coast	[15]Cameron Meadows etc., La. Gulf Coast	[16]Texas Gulf Coast (Grade A)	[17]Texas Gulf Coast (Grade B)	[18]Upper-Lower Texas Gulf Coast	[19]Refugio Grade, Lower Texas Coast	[20]Mirando Grade, Southwest Texas
17–17.9	....	0.925	....	....	....	....	....	....	....	....	....	....	....	....	1.34 1.36	....	....	....	....	....
18–18.9	....	0.95	1.18	1.05	1.20	1.18	1.15	1.18	1.16	1.11	1.09	1.28	1.23	1.41	1.38	1.41	1.33	1.28	1.43	1.38
19–19.9	1.20	0.975	1.20	1.07	1.22	1.20	1.17	1.20	1.18	1.13	1.11	1.30	1.25	1.43	1.40	1.43	1.35	1.30	1.45	1.40
20–20.9	1.22	1.00	1.22	1.09	1.24	1.22	1.19	1.22	1.20	1.15	1.13	1.32	1.27	1.45	1.42	1.45	1.37	1.32	1.47	1.42
21–21.9	1.24	1.025	1.24	1.11	1.26	1.25	1.21	1.24	1.22	1.17	1.15	1.34	1.29	1.47	1.45	1.47	1.39	1.34	1.49	1.44
22–22.9	1.26	1.05	1.26	1.13	1.28	1.26	1.23	1.26	1.24	1.19	1.17	1.36	1.31	1.49	1.48	1.49	1.41	1.36	1.51	1.46
23–23.9	1.28	1.075	1.28	1.15	1.30	1.28	1.25	1.28	1.26	1.21	1.19	1.38	1.33	1.51	1.51	1.51	1.43	1.38	1.53	1.48
24–24.9	1.30	1.10	1.30	1.17	1.32	1.30	1.27	1.30	1.28	1.23	1.21	1.40	1.35	1.53	1.54	1.53	1.45	1.40	1.55	1.50
25–25.9	1.32	1.125	1.32	1.19	1.34	1.32	....	1.32	1.30	1.25	1.23	1.42	1.37	1.55	1.57	1.55	1.47	1.42	1.57	1.52
26–26.9	1.34	1.15	1.34	1.21	1.36	1.34	....	1.34	1.32	1.27	1.25	1.44	1.39	1.57	1.59	1.57	1.49	1.44	1.59	1.54
27–27.9	1.36	1.175	1.36	1.23	1.38	1.36	....	1.36	1.34	1.29	1.27	1.46	1.41	1.59	1.61	1.59	1.51	1.46	1.61	1.56
28–28.9	1.38	1.20	1.38	1.25	1.40	1.38	....	1.38	1.36	1.31	1.29	1.48	1.43	1.61	1.63	1.61	1.53	1.48	1.63	1.58
29–29.9	1.40	1.225	1.40	1.27	1.42	1.40	....	1.40	1.38	1.33	1.31	1.50	1.45	1.63	1.65	1.63	1.55	1.50	1.65	1.60
30–30.9	1.42	1.25	1.42	1.29	1.44	1.42	....	1.42	1.40	1.35	1.33	1.52	1.47	1.65	1.67	1.65	1.57	1.52	1.67	1.62
31–31.9	1.44	1.275	1.44	1.31	1.46	1.44	....	1.44	1.42	1.37	1.35	1.54	1.49	1.67	1.69	1.67	1.59	1.54	1.69	1.64
32–32.9	1.46	....	1.46	1.33	1.48	1.46	....	1.46	1.44	1.39	1.37	1.56	1.51	1.69	1.71	1.69	1.61	1.56	1.71	1.66
33–33.9	1.48	....	1.48	1.35	1.50	1.48	....	1.48	1.46	1.41	1.39	1.58	1.53	1.71	1.73	1.71	1.63	1.58	1.73	1.68
34–34.9	1.50	....	1.50	1.37	1.52	1.50	....	1.50	1.48	1.43	1.41	1.60	1.55	1.73	....	1.73	1.65	1.60	1.75	1.70
35–35.9	1.52	....	1.52	1.39	1.54	1.52	....	1.52	1.50	1.45	1.43	1.62	1.57	1.75	....	1.75	1.67	1.62	1.77	1.72
36–36.9	1.54	....	1.54	1.41	1.56	1.54	....	1.54	1.52	1.47	1.45	1.64	1.59	1.77	....	1.77	1.69	1.64	1.79	1.74
37–37.9	1.56	....	1.56	1.43	1.58	1.56	....	1.56	1.54	1.49	1.47	1.66	1.61	1.79	....	1.79	1.71	1.66	1.81	1.76
38–38.9	1.58	....	1.58	1.45	1.60	1.58	....	1.58	1.56	1.51	1.49	1.68	1.63	1.81	....	1.81	1.73	1.68	1.83	1.78
39–39.9	1.60	....	1.60	1.47	1.62	1.60	....	1.60	1.58	1.53	1.51	1.70	1.65	1.83	....	1.83	1.75	1.70	1.85	1.80
40 and Up																				

[1] **Magnolia** and others in Oklahoma. **Ohio Oil** for Grass Creek light, Lance Creek, and Rock Creek, Wyoming, and Elk Basin light, Wyoming and Montana.

[2] **Carter Oil Co.** prices for Elk Basin, Oregon Basin, and Frannie. **Ohio Oil Co.** schedule for Grass Creek heavy, Garland, Byron, Oregon Basin, Wyoming, and Elk Basin heavy, Wyoming and Montana.

[3] **Humble** and others for North Texas and Texas Panhandle.

[4] Exceptions to this schedule for West Texas-New Mexico include prices same as for North Texas by **Gulf** for Keystone-Ellenburger and Sand Hills-Ellenburger-West; by **The Texas Co.** for Todd Deep; and by **Magnolia** for Abell and Apco-Warner (Ordovician) fields and Kermit Ellenburger and Keystone Ellenburger (Ordovician) pools. Another exception is **Magnolia's** schedule, same as in column bearing Footnote 2, for Fullerton and Union (Clear Fork-Permian) fields, Siluro-Devonian, and Fullerton Ellenburger pools.

[5] **Humble** schedule for Anderson, Cherokee, Freestone, Limestone and Navarro counties and Navarro Crossing field.

[6] **Gulf** and others for Rodessa and Marion County. Also **Gulf** at New Hope, Winsboro, Pickton, and Pittsburgh except minimum is $1.30 for 25-25.9 gravity. **Magnolia** for Cass, Harrison, Marion and Panola counties, including Rodessa field.

[7] **Magnolia** at Talco. **Humble** for Hawkins, Sand Flat Paluxy sand and Talco crudes.

[8] **Gulf** for Caddo, Haynesville, Bull Bayou, Crichton, and DeSoto. **Standard of New Jersey** (La. Div.) for Caddo, Cotton Valley, Haynesville, Rodessa, Shreveport (Cross Lake), Sligo. **Magnolia** for Rodessa, La., and Miller County, Arkansas, and for Cass, Harrison, Marion, and Panola counties, Texas. **Gulf** at Jennings, S. La., except minimum is $1.42 covering 31-31.9 gravity.

[9] **Standard of New Jersey** (La. Div.) for Atlanta sandstone, Dorcheat-Macedonia sandstone, De Soto and Sabine parishes, Forke, Homer, Magnolia sandstone, Miller County-Garland City, Arkansas, Sugar Creek, Village sandstone. **Gulf** for Homer.

[10] Catahoula Lake, Cypress Bayou, Indian Bayou, Lake Larto, etc.

[11] Atlanta, Buckner, Magnolia, Patton, Schuler, Village, etc.

[12] **Central La. fields: Standard of N. J.** (La. Div.) for Little Creek, Olla, South Olla.

Coastal La. fields: Standard of N. J. (La. Div.) for Anse La Butte, Arnaudville, Bay des Allemands, Bay Perot, Bayou Sale, Branch, Bunkie, Choctaw, Darrow, Delta Farms, Eola, Golden Meadows, Iberia, Jeanerette, Krotz Springs, Lake Chicot, Lirette, Napoleonville, North Cankton, North Crowley, North Jeanerette, Pine Prairie, Port Allen, Port Barre, Potash, Raceland, Reddell, Roanoke, St. James, St. Martinville, Suttetson, South Crowley, South Jeanerette, University Deep, Vacherie. **Pan American** schedule for La Place, Sorrento, and Valentine. **Shell Oil Co.** schedule for Black Bayou light, Chalkley, Gibson, Good Hope, Happytown, Iowa light, La Pice, Roanoke, South Houma, St. Gabriel K-sand, Weeks sand, West Lake Verret, and White Castle high cold test. **Sun Oil Co.** schedule for Egan and Belle Isle distillate. **Texas Co.** schedule for Avery Island, Bateman Lake, Bateman Lake distillate, Bay de Chene, Delacroix Island, Delta Duck, Delta Farms, Dog Lake, Erath, Fausse Pointe, Garden Island Bay, Golden Meadows, Horseshoe Bayou, Jefferson Island, Lafitte, Lake Mongoulois, Lake Salvador, Paradis, Plumb Bob, Vermilion Bay, West Cote Blanche Bay. Also **Texas Co.** prices for Bay St. Elaine, Caillou Island, Iberia, Lake Barre, Lake Pelto, and Leeville except starting with 28-28.9 gravity $1.46 and then up; while lower gravities in those fields take Louisiana Gulf Coast prices, $1.41 for below 20 gravity and up to $1.57 for 27-27.9 gravity (see column with Footnote 14).

[13] **Central La.: Standard of N. J.** (La. Div.) for Hemphill, Holly Ridge, Lake St. John all sands, Nebo. **Sun Oil Co.** for Big Creek, Delhi, West Delhi, and South Big Creek.

South La.: Standard of N. J. (La. Div.) for Bayou Mallett, Hope Villa, Lewisburg, Rosedale, South Lewisburg, Westwego. **Gulf Oil** for Hager Martin.

[14] **Standard of N. J.** (La. Div.) for University Shallow. **Shell Oil Co.** for Black Bayou heavy, Iowa heavy, White Castle low cold test, and St. Gabriel F sand type. **Sun Oil Co.** for Bayou Blue, Belle Isle below 36 gravity. **Texas Co.** for Bayou St. Elaine, Caillou Island, Lake Barre, Lake Pelto and Leeville for crude ranging in gravity up to 27-27.9; for lighter oils in those fields prices are same as in Col. 12. **Gulf Oil Corp.** at Edgerly, Starks, and Vinton. Also **Gulf** for East Hackberry and Leeville except top is $1.71 covering 34 gravity and above. Deduct 10 cents for **Gulf's** prices for Bayou Couba, Bully Camp, Grand Bay, Quarantine Bay, Timbalier Bay, and West Bay and limit gravity range between $1.47 for below 28 gravity and $1.65 for 36 gravity and above. Deduct 3 cents for **Pan American** at Charenton but top is $1.60 for 30 and above.

[15] **Magnolia** at Cameron Meadows, Lockport, West Gueydan. **Gulf** at Cameron Meadows.

[16] **Atlantic** schedule for Barbers Hill. **Gulf** schedule for Barbers Hill, Big Creek, Blue Ridge, Fannett, Goose Creek, Hankamer, Hull old, Lochridge, Moore, Sour Lake, South Liberty, Spindle Top, Stowell, Thompson, and West Beaumont. **Humble** schedule for Amelia, Clear Lake, Danbury, Goose Creek, Hastings, Lovell Lake, Magnet-Withers, Mykawa, Mykawa new, North Lovell Lake, Raccoon Bend, South Thompson, Sugarland, Thompson, Webster. **Pan American Prod. Co.** schedule for Hastings and South Houston. **Sun** schedule for Barbers Hill, Batson old, Cotton Lake, Cottonwood, Esperson below 35 gravity, Gilbert Ranch, Goose Creek, Hull below 25, Humble below 35, Kirby-Vicksburg, Kirby-Miocene, Labelle, Nome, North Winnie, Orange, Saratoga heavy, Sour Lake, South Liberty, and Stowell. **Texas Co.** schedule for Bay City, Blue Lake Francitas, Ganado, Harmon, Hillje, Humble, Kubela, Lane City, Little Kentucky, Magnet-Withers, Manvel, Markham, Mauritz, Mayo, Midfields, Pickett Ridge, Port Neches, Sour Lake, Stewart, Sugar Valley, West Columbia, and Withers North.

[17] **Gulf** schedule for Anahuac, Hull new, Pierce Junction, Thompson deep and West Orange. (For **Gulf** at Segno, Wing area, Polk Co. deduct 2 cents.) **Humble** schedule for Anahuac, Angleton, Cedar Point, Fishers' Reef, Hockley, Hull old and new, Jackson Pasture, North Katy, Pierce Junction, Red Fish Reef, Seeligson, Stratton, and Turtle Bay fields. **Magnolia** schedule for Haldeman, La Gloria, Premont, Premont Prospect, Seeligson, and Wilson fields. **Pan American** schedule for Alta Loma. **Sun** schedule for **(1) Upper Texas Coastal fields** of Anahuac, Batson new, Caplen, Esperson 35 gravity and above, Fig Ridge, Hull 25 gravity and above, Kirby, Oyster Bayou, Saratoga light, Seabreeze, South China, South Esperson, Turtle Bay, West Orange 31 gravity and above, Willow Slough, and **(2) Lower Texas Coastal fields** of Blucher, Dan Sullivan, East, Flores, Frost, Garcia, North Rincon, North Sun, Seeligson, Sun, Tijerina-Canales, and Well.

[18] **Humble** schedule for **(1) Upper Texas Coastal fields** of Dickinson, Boling, Danbury 5655′ and 7625′ sands, Gillock, Hardin, Mayes, and Rowan; and **(2) Lower Texas Coastal fields** of Kelsey 5500′, 5700′, 6000′, 6100′, 6400′, and 6500′ sands, Monte Negra, Scott and Hopper, and Sejita fields. **Pan American** schedule for Gillock-Dickinson, League City, and Chocolate Bayou. **Sun** schedule for Hardin.

[19] **Atlantic** schedule for Refugio and Greta. **Humble** schedule for Bonnie View, Gregory, Greta, Melon Creek, O'Connor-McFaddin, Plymouth, Refugio-Fox, Taft, and Tom O'Connor. **Texas Co.** schedule for Saxet but top is $1.61 for 28-28.9 gravity.

[20] **Humble** schedule for Armstrong, Colorado, Comitas, Eagle Hill, Escobas, Glen, Gormac, Government Wells (N. and S), Heyser, Hoffman, Holbein, Kelsey 4700′ and 5200′ sands, Las Animas, Le Ferre, Loma Novia, Lundell, Manila, Neuhaus, North Albercas, Randado, Sarnosa, Sheriff, South Bruni, Welder and Yeager fields. **Magnolia** schedule for Campana South, Casa Blanca, Casa Blanca North, Casa Blanca West, Cedro Hill, Charamousca South, Cole West, Gormac, Government Wells North and South, Herbst, Killam, Killam North, Kohler, Kohler Deep, Labbe, Loma Alto, Loma Alto Wilcox, Loma Novia, Lopez, Lundell, Olilton, Peters, Peters East, Piedre Lumbre, Rancho Solo, Rancho Solo Extension, Seven Sisters, Seven Sisters South and Volpe fields. Also **Magnolia** schedule for Jackson County crude in LaSalle, LaWard North, Lolita, Maubro, Texana, and West Ranch fields, for O'Hern crude in the East Bruni and O'Hern fields, and for Hobson crude in Hobson and Hysaw fields. **Sun** schedule for Bennett, Guerra, North Government Wells, Sarnosa, South Government Wells, and Yturria. **Texas Co.** schedule for "Duval-Mirando."

MID-CONTINENT FLAT PRICES

FIELD—	Flat Price	Date Posted
Arkansas:		
Big Crk., Calhoun, Columbia, McKamie, Macedonia, Dorcheat, sour dist.	$1.65	7–25–46
Dorcheat, Macedonia, dist'l.	1.70	7–25–46
Smackover	1.28	7–25–46
Sandstone Field crudes	1.81	7–25–46
Louisiana, North:		
Cotton Valley Distillate	1.70	7–25–46
Cotton Valley (Holloway sn.)	1.65	7–25–46
Lisbon Distillate	1.70	7–25–46
Homer Crude	1.81	7–25–46
Desoto-Sabine Sandstone cr.	1.81	7–25–46
Louisiana, South:		
Neale, Beauregard Parish	1.55	7–25–46
Mississippi:		
Gwinville Distillate	1.70	7–25–46
Texas:		
Cayuga	1.27	7–25–46
Chapel Hill 50° and up	1.60	7–25–46
Chapel Hill below 50°	1.53	7–25–46
Clay Creek	1.35	7–25–46
Cleveland, N. Cleveland	1.61	7–25–46
Conroe	1.78	7–25–46
East Texas, Flag Lk, Bazette	1.60	7–25–46
Flour Bluff, East Flour Bluff, and La Rosa	1.68	7–25–46
Humble 35° & Up (Sun Oil)	1.71	7–25–46
Livingston, Cleveland, Mercy	1.60	7–25–46
Luling	1.40	7–25–46
Lytton Springs, Dole, etc.	1.52	7–25–46
Salt Flat, Clark, Darst Creek, Hilbig, Lentz, Manford, Tenny Creek, United, Zoboroski	1.49	7–25–46
Satsuma	1.75	7–25–46
South Cotton Lake	1.70	7–25–46
Tomball	1.75	7–25–46
Van	1.43	7–25–46
Willamar (Pan. Am.)	1.35	7–25–46
Yates (Deep)	1.30	7–25–46

Executive Appointments Are Announced by Humble

C. E. Reistle, Jr.

Morgan J. Davis

Humble Oil & Refining Company of Houston has created several executive positions and broadened the duties and responsibilities of some supervisors.

Morgan J. Davis, chief geologist, also has been made manager of the exploration department. His staff has been increased by two new positions of assistant chief geologist, filled by J. Ben Carsey, formerly division geologist of the Louisiana-Mississippi division, and Ed J. Hamner, formerly assistant division geologist in the Southwest Texas division. Carsey will be in charge of exploration work and Hamner of production geology and geological problems related to development.

C. E. Reistle, Jr., has been named manager of the production department. R. C. Barbour, former East Texas division production superintendent, has been made general superintendent of the production department, succeeding Reistle. C. W. DeLancey is now superintendent of the Gulf Coast division of the department, succeeding G. B. Corless, whose resignation was announced last week. R. E. Bridges, formerly Gulf Coast division engineer, will take over DeLancey's old duties as assistant superintendent of the Gulf Coast division. R. J. Schilthuis, former division petroleum engineer in the Southwest Texas division, has assumed the newly created post of assistant superintendent of the natural gas division of the production department.

Ray H. Horton has been appointed manager of the industrial relations department. H. S. Warner and K. R. Dailey were appointed to newly created positions as assistant managers.

D. F. Haynes has been made manager of the crude oil department.

Believes Bolivian Revolt To Delay Oil Law Change

The revolution in Bolivia will greatly delay enactment of the projected petroleum law, according to Jorge T. Lavadenz, president of Yacimientos Petroliferos Fiscales Bolivianos (Bolovian Government Oil Fields, who is now in the United States.

However, Lavadenz has received cable instructions from La Paz to continue his negotiations in the United States in Bolivia's effort to enlist foreign capital and technical know-how in developing her oil resources.

Oil Imports and Taxes to be Studied By IPAA; Annual Meeting is Discussed

Executive committeemen and state vice presidents of the Independent Petroleum Association of America last week in Cheyenne, Wyo., held a planning conference where they evaluated the price increase as the first concrete step toward stabilization of the independent domestic oil industry. The industry, once again free of unhealthy bureau control, finds itself in a position once again to plan and carry out the steps necessary to total stabilization. The full weight of the Association will be directed toward carrying out the balance of the program as adopted by the membership, and definite steps were planned at Cheyenne toward this end.

Vital issues remain to be clarified, officials pointed out. These include the present trend toward increased importation of foreign oil, and every effort is to be made to establish a just and workable import schedule consistent with international petroleum trade requirements and fixed on a basis that would not harm or remain a threat to domestic production.

High taxes also will be studied in light of the need for a sound economic position. A continuation of conservation practices in the development of the nation's oil will be stressed and in this connection the recent excesses of production over demand leading to wasteful, above-ground storage of crude and products will be a matter to be scrutinized in cooperation with the Interstate Oil Compact Commission.

The Association's Supply and Demand Committee reported that there have been relatively large demands for petroleum products, but that increases in crude oil production have exceeded these demands with the result that 13 million barrels of crude and products were added to storage in April, May, and June. The committee criticized this trend toward excessive storage as unsound and wasteful. The committee's estimates of future total oil demands averaged 5,250,000 barrels daily for the third quarter of 1946 and 5,300,000 barrels for the last three months of the year. The report recommended that the Interstate Oil Compact Commission urge the state regulatory bodies to reduce crude oil production to consumptive demand.

IPAA executives gave considerable study to the newly-formed National Petroleum Council and its anticipated relationship with the Department of the Interior and with the petroleum industry.

Plans for the annual IPAA meeting October 28-30 in Fort Worth were advanced, and additional plans were made for a district meeting to be held August 5 at Casper where Russell B. Brown, general counsel of the Association, Washington, and H. B. Fell, executive vice president at Ardmore, will be the principal speakers. This meeting will be under the direction of E. J. Sullivan of Casper, vice president of IPAA for the State of Wyoming.

Pan American Completes H. R. Smith Company Deal

The American Production Company last week completed its deal with H. R. Smith and associates for their interest in 60 wells in the East Texas field, together with certain royalty interests in the East Texas field and Nueces County, Texas, the deal being retroactive to July 1.

Of the wells involved, 31 were owned by H. R. Smith, Incorporated, in which company Pan American acquired all the capital stock and assets. The firm of H. R. Smith, Incorporated, will continue to own and operate its properties. The remaining wells were individually owned by H. R. Smith and several associates.

Former officials of H. R. Smith, Incorporated, have resigned. The new directorate comprises E. R. Turner, Harold Decker and J. M. Vetter. Officers are Turner, president; Decker, vice president; E. T. Martin, treasurer and assistant secretary, and W. M. Padgett, secretary and assistant treasurer. H. R. Smith, Incorporated, headquarters have been moved from San Antonio to Houston.

Fohs Oil Companies Name New Slate of Officials

Lawrence S. Reed, president of Texas Gulf Producing Company which recently acquired a 90 percent interest in Fohs Oil Company, last week became president of Fohs. Other officers elected are R. A. Montague, vice president; Val T. Billups, vice president; W. H. Hendrickson, secretary and assistant treasurer; H. L. Luther, treasurer, and John M. Carter, assistant secretary. New directors include H. B. Clark, F. Julius Fohs, Gordon W. Reed, Lawrence S. Reed, Montague, Billups and Hendrickson.

Foroy Petroleum, Inc., wholly-owned subsidiary of Fohs Oil Company, has been merged with Fohs. DeLarge Oil Company, owned 70 percent by Fohs, also is headed by Hendrickson.

Starr County Properties Bought by New Company

Starr Oil Company has been organized to operate Starr County properties recently purchased for $2½ million by Raymond I. Arsht of Houston who is president of the new concern. M. D. Meyer is secretary. Properties purchased from Lockhart & Company of San Antonio include 24 producing wells with 1000 barrels daily production, 7000 acres of land and 10 locations in proven territory. These will be drilled immediately. Arsht, who also is president of the A. & R. Oil Company, said the new company would headquarter in Houston.

Bureau's Demand Estimate Will Show Slight Increase

A slightly increased demand for domestic crude this month will be shown in the forecast to be issued this week by the Bureau of Mines.

It was indicated demand for Texas crude is foreseen as 10,000 barrels above the 2,110,000 daily forecast for July, but the rates for Oklahoma will remain unchanged at 384,000 barrels daily and Kansas at 260,000 barrels daily.

The Bureau noted that actual demand is running considerably higher than estimates but is being reflected in increases in refined stock. Gasoline stocks have been working downward, but at less than normal rates, while distillate fuel stocks have been building at more than normal. The situation in heavy fuel oil has improved. It is pointed out that production was stimulated before the price situation crystallized, but refiners who bought oil at OPA prices and stored part of the resulting products stand to make something from the recently-announced price increases.

Accompanying the monthly forecast will be an amended long-range study of demand, now being revised upward.

Crude Production in the United States

(Estimates compiled by THE OIL WEEKLY. All figures indicate daily averages in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED August 3	July 27
Alabama	1,150	1,150
Arkansas	74,100	74,750
California	878,400	877,000
Colorado	36,650	37,000
Florida	200	200
Illinois	197,400	209,800
Indiana	18,950	19,050
Kansas	264,100	271,500
Kentucky	31,350	31,500
Louisiana	384,550	383,600
North Louisiana	83,250	82,950
South Louisiana	301,300	300,650
Michigan	46,050	46,750
Mississippi	62,950	65,150
Missouri	100	100
Montana	25,300	24,900
Nebraska	750	800
New Mexico	101,350	98,600
New York	13,250	11,450
Ohio	7,600	8,050
Oklahoma	381,100	383,650
Pennsylvania	35,250	36,500
Tennessee	35	35
Texas	2,205,950	2,227,550
Texas R. R. Comm. Districts:		
Dist. 1—S. Central	19,500	19,500
Dist. 2—Lower Gulf Coast	157,150	158,100
Dist. 3—Upper Gulf Coast	504,100	511,350
Dist. 4—S. West	226,900	228,000
Dist. 5—E. Central	43,800	44,150
Dist. 6—E. Texas Field	315,600	315,000
Dist. 6—Rest of N. East	107,150	107,800
Dist. 7-B W. Central	32,100	32,000
Dist. 7-C West	28,100	28,000
Dist. 8—West	556,400	569,150
Dist. 9—N. Central	130,100	129,300
Dist. 10—Panhandle	85,050	85,200
West Virginia	7,250	6,750
Wyoming	113,500	113,100
Total United States	4,887,285	4,928,935

Total stocks, foreign and domestic, July 27, as reported by the Bureau of Mines were 223,756,000 barrels with a daily average production of 4,926,000 and runs to stills 4,896,000.

Varied Lease and Purchase Plans Opened by WAA for Big Inch Lines

Sixteen bids for the purchase or lease of the Big Inch pipe line system were opened by the War Assets Administration July 31, but only five of the bidders unreservedly committed themselves to use of the lines for oil transport.

The remaining bids all contemplated use of one or both of the lines for natural gas, either immediately or as an eventuality if oil service proved unprofitable, but it was indicated by WAA officials that a further authorization from Congress would be sought before closing any agreement looking to use of the lines as natural gas carriers.

Justice Watches Proceeding

Present at the opening of the bids was J. Watson Snyder, antitrust attorney of the Department of Justice. The department will have to pass upon any transfer of the lines to private ownership or operation, from the standpoint of the antitrust laws, but there was nothing in any of the bids which appeared to aim at the setting up of a monopoly or a concentration of power which would bring them afoul of the department.

The several bids involving the use of the lines for gas were contingent upon issuance of the necessary certificate by the Federal Power Commission, and they also carried provisions for retention in stand-by condition of the oil facilities not required in natural gas transport, at the expense either of the government or the bidder, to insure a quick return of the systems to petroleum service in the event of a national emergency.

Analysis Requires Weeks

WAA officials said it would require several weeks to complete an analysis of the bids. If one of the proposals involving retention of the lines in oil service is acceptable, it is probable a deal could be worked out without delay, but if it is deemed that the interests of the government will be better served by one of the offers involving conversion to gas, it is expected the matter will have to go over until Congress meets again in January (unless it is called back in special session this year).

WAA announced that the bids would be analyzed in the following order: (1) oil proposals, (2) oil-gas combinations or alternatives, (3) all-gas offers and (4) any others.

Some of the proposals, the agency said, may prove to be so indefinite as to preclude their consideration as firm offers.

Bidders will be called upon to substantiate the terms and conditions of their proposals, but no bidder will be permitted to change the essential form of any tender.

Under several of the proposals submitted to WAA, the government could recoup all the money sunk in the systems.

Bids received by WAA were as follows:

Bauer Proposal

John Bauer, New York, proposes to form a cooperative group of producers, refiners, dealers and gas distributors to operate the two lines on a cooperative basis as common carriers of crude and refined products, but if lines cannot be so operated at capacity to convert one or both to natural gas. If both lines are successful as oil carriers, proposes to build a 30-inch gas line along the same right-of-way to serve markets from Boston to Baltimore. Proposes to pay $70 million for the two lines, the money to be loaned by the government, and the government would have a member on the board of directors. Arnold and Fortas (former Assistant Attorney General Thurman Arnold, head of the antitrust division of the Department of Justice, and Abe Fortas, formerly Undersecretary of the Interior) are counsel. Proposes that War Assets Administration help technically and otherwise in setting up the organization.

West Texas Hookup

Big Inch Oil, Inc., New York, on basis of studies of market and demand showing that operation of the lines for oil would be economically sound, offered $110 million for both systems, $1 million on signing of contract, $65 million on closing date and remaining $44 million in 4 percent debentures maturing in 30 years. Proposes to spend approximately $20 million to construct a 20-inch pipe line from West Texas to the western terminus of Big Inch and in additional facilities, and reserves the right to tear up the Little Big Inch between eastern Ohio and Linden, N. J., for relocation in West Texas. Company will not engage in any other oil activity and will operate lines as independent common carriers, with reasonable rates and reasonable minimum tenders. Proposes also to build a 30-inch natural gas pipe line along the same right-of-way. Dividends on common stock would be limited to not more than 10 percent annually until surplus of $5 million has been accumulated. Has arranged to obtain $96 million needed to acquire lines and construct additional facilities and set up a working capital of $10 million. Reserves the right to reverse the flow of lines if and to the extent necessary. Charles A. Smith signed as president.

Natural Gas Plan

Big Inch Natural Gas Transmission Company, Washington, R. J. Bulkley, president, offered $85 million in cash for the two lines exclusive of pumping stations, electric transmission lines, tank farms, feeder lines not suitable for gas and lines to refineries, with view to conversion to natural gas. Offer con-

tingent upon issuance of necessary certificate by FPC.

Lease With Option

W. Lee Clements, Barton, Ark., proposes to create a marketing cooperative of purchasers and distributors of oil and gas and petroleum refiners, and lease lines for 25 years with option to buy on one of following terms: (1) Rental for the lines to be paid on a fixed charge per barrel of oil delivered on basis of operation at 75 percent of designed capacity, returning to the government, if earned, 7 percent on value less depreciation at four percent annually; (2) Little Big Inch to move products on rentals as above and Big Inch converted to go with rental on volume of deliveries on the basis of 250,000 MCF daily capacity; (3) Both lines to be converted, with rental on Little Big Inch on basis of 150,000 MCF daily capacity.

Conversion Arrangement

J. W. Crotty, Dallas, proposes to convert one or both lines to gas, to form a corporation with a working capital of $160 million of which $32½ million would be used for conversion. Offered $127½ million for both systems, with $5 million down and remainder payable on completion of conversion in not more than three years, with quicker liquidation if one line is kept in oil service. Associated with Crotty were Dr. Charles A. Pohl and H. R. Dillingham, New York; Roy C. Coffey, former chief counsel for Lone Star Oil Company; Hart Willis, attorney for Southern Natural Gas Company; Oswin C. Rowbotham, Washington, and Burt E. Cranfill, oil and gas operator.

Relocation of Line

L. M. Glasco, Dallas oil operator, proposed on behalf of a group of independent operators to acquire the Little Big Inch and relocate it to run from the Permian Basin to California. A corporation is to be formed, and 10 percent of an amount to be agreed upon will be deposited in escrow, with the remaining 90 percent to be loaned by the government for ten years. Would lease the line for movement of crude for 50 years at a rental of 5 cents per barrel with an option to buy in 20 years or less at present value. Associated with Glasco are G. H. Vaughn, Walter W. Lechner, E. B. Germany, Angus G. Wynne, J. C. Hawkins, W. T. Huse, A. L. Slaughter, W. E. Butler and Al Meadors. The project was indorsed by Governor Coke Stevenson and members of the Texas Railroad Commission.

Lease-Sale Agreement

Frank M. McCraw, Anniston, Ala., proposes to organize a partnership or corporation to operate the two lines as common carriers of oil on a lease-sale agreement under which $146 million would be paid less depreciation at 4 percent annually from completion of the lines. Will invest $20 million including a down payment of $8 million, and would pay a rental of eight cents per barrel on the Big Inch, but not less than $5 million annually, and 9½ cents a barrel on the Little Inch, but not less than $3 million a year, to be applied against the purchase price.

Percentage Lease

A. U. Puckitt for a group headed by John R. Moroney, president of Petroleum Royalty Corporation, Dallas, proposed to take over both lines, using either or both for oil and gas, on a percentage lease calling for a payment of 15 percent of gross income for 30 years with an option to purchase at original cost less depreciation. Others in the group are R. W. Fair, Tyler, Texas, and Bert Aston, Roswell, N. Mex.

Would Convert Both

Glenn H. McCarthy of the McCarthy Oil and Gas Corporation, Houston, proposed to acquire both lines for conversion to natural gas at a price of $80 million to be paid either $20 million down, $30 million in three years and the remaining $30 million in six years, or all cash if demanded.

Tulsa Offer

Noyack Oil Corporation, Tulsa, also offered $80 million for the two lines, for operation as common carriers except that the Little Big Inch is to be used for gas operation for not exceeding seven years, after which it is to be returned to petroleum. The company offered the $80 million in first mortgage 20-year bonds, plus a proposed issue of Class A common stock which would be eligible for double the dividends paid on other classes. An offer of $40 million also was made for Big Inch alone and a similar amount for Little Inch, both to be paid for in bonds and Class A stock, with WAA to relocate the southern end or build an extension to make the terminus of the Little Inch at Longview.

Oil or Gas Alternate

Russell Palmer, Washington, offered $135 million for both systems for oil operation or $115 million for gas, payable with interest over a period of 25 years at a maximum of $8,050,000 annually, or a total of over $200 million. A company will be formed to acquire and operate the lines, and any improvements or rehabilitation needed to use for oil service is to be paid for by WAA, which also would be required to stand the expense of conversion if they were to be used for gas. If converted to gas and reconverted to oil at a subsequent date, the government would receive an additional $20 million. Payment would be made for the lines through first mortgage bonds, but the company would raise a $10 million working fund.

Poe and Texans Bid

E. Holley Poe and Associates, New York, offered $260 million for 40-year lease of the two lines or $100 million for their purchase for use as gas carriers. If leased, a minimum rental of $6½ million a year would be paid; if purchased, $80 million would be paid down and $20 million would be deferred for instalment payments depending upon the volume of gas carried. Associated with Poe are E. DeGolyer, Dallas, and Charles I. Francis, Herman Brown and George R. Brown, Houston. A corporation would be formed, to be publicly financed. The rental would be based on 5½ cents per MCF of gas sold, and if the lines subsequently should be reconverted to oil movement a comparable rental would be worked out.

Common Carrier Plan

The Ryford Pipe Line Company, Chicago, proposed to acquire the lines for common carrier use, forming an operating company among independent producers and refiners, with assurance from several major companies that they would give the lines business. Relocation of the lines to serve producing areas in southern Oklahoma, Texas, Louisiana and the Gulf Coast, and to reach markets in Illinois, Indiana, Michigan and Ohio would be necessary. The former, costing $25 to $30 million, would enable the government to sell refineries which it now cannot dispose of. Feeders from West Texas also would be necessary. The company would lease Big Inch at a rental to be agreed upon for a total of 15 years, with option for purchase at $40 million cash, and would buy the Little Inch for $30 million, half cash and the remainder in debentures.. The right would be reserved to convert one or both lines to gas if operations in oil proved unprofitable or if petroleum supplies dwindle and the marketing areas depended more upon gas.

Sinclair Has Proposal

Sinclair Refining Company, New York, proposed to take over the lines from Phoenixville to New York Harbor and Philadelphia and the facilities at

New Petroleum Council To Meet on September 26

The first regular meeting of the National Petroleum Council has been set for September 26, when reports will be received from the organizing and program committees.

It is expected that Acting Director of the Oil and Gas Division Ralph K. Davies, now on vacation, will return to Washington for the meeting, at which it is probable a permanent head for the division will be announced.

"Mother Hubbard" Activity

A tacit agreement seems to have been reached between the Department of Justice, the Federal District Court and the defendants in the "Mother Hubbard" suit that nothing further is to be done on the motions filed last month for a bill of particulars before October 10.

Ordinarily, such a motion would be promptly answered, argued and ruled upon, but because of the vacation period it apparently has been decided to defer replies and pleadings.

Louisiana Allowable

The Louisiana Conservation Commission's order for August increased the allowable to 429,405 barrels daily or 764 barrels more daily than for July.

District totals are: Houma 63,237, Lafayette 116,051, Lake Charles 65,370, New Orleans 91,124, Monroe 56,570, Shreveport 37,053.

those points, but made no offer. A telegram from Gulf Oil Corporation supported the proposal.

Price by Arbitration

Syndicated Industries, Inc., New York, proposed to form the Petro Carrier Corporation to operate the two systems as common carriers under a ten-year lease with option to purchase at a price to be set by arbitration. Rental would be based upon straight royalty of approximately one-half cent per barrel carried, with payments applying toward purchase price. Corporation would have a capital of $10 million, to be subscribed by small independent operators.

Both for Both

Trans-Continental Gas Pipe Line Company, Washington, offered $85 million for both lines or $54 million for Big Inch and $30 million for Little Big Inch, for conversion to gas transportation. Company has arranged for the raising of the $130½ million required for the acquisition of both lines or $100 million for Big Inch alone, and would expend approximately $44 million in the conversion. It has firm contracts with Texas producers for sufficient gas from reserves of 128,700 acres in six major fields, and contract commitments for sales of 300,000,000 MCF daily to existing utility companies in the areas.

Rack on Standby Basis as Naval Contract Completed

Tank car shipments of West Texas crude to coastal refineries engaged in filling a special fuel oil contract for the U. S. Navy were terminated July 29. This movement began April 17, and provided a market for 3,317,059 barrels of mixed grades of sour oil that would not have been produced otherwise due to all pipe lines serving the Permian Basin operating at capacity load.

The oil was provided by Humble Oil & Refining Company and loaded at the Midland rack by the Atlantic Pipe Line Company for consignment to the Eastern States Petroleum Company's Houston refinery and Humble's plant at Baytown. The 76-car capacity rack will be kept on a standby basis, as no appreciable increase in the pipe line outlet for the Permian Basin will occur until next year when pipe becomes available for projected lines.

Magnolia Completes Loop

Magnolia Pipe Line Company has completed installation of a 35-mile 10-inch loop, parallel to two 8-inch units, in its West Texas system between Andrews station, Andrews County, and its Midland terminal. The loop was built by the Latex Construction Company.

This third unit will enable the company to handle sweet crude runs from Andrews County fields direct to Midland, with a separate line handling sour oil runs from Slaughter and Seminole fields. Booster station equipment will not be available for some months to utilize the maximum capacity of the added line space.

Peak Volume Is Set By Carthage Field

Natural gas production in the Carthage field, Panola County sector of East Texas, scored a new peak volume of 244,907,000 feet daily during June, or 18,974,000 feet above the May average. A large percentage of the field's wells have not been connected by pipe lines, although a market outlet is pending.

Tennessee Gas & Transmission Company's purchases averaged 112,151,000 feet daily, while United Gas Pipe Line Company averaged 103,115,000 feet daily.

The field's output of condensate averaged 3744 barrels daily in June.

Casper-Denver Products Line Reported Approved

An 8-inch products line from Casper, Wyo., to Denver reportedly has been approved by three participating companies and construction will get under way in 1947 as soon as materials become available.

Texas Pipe Line Company, Standard Oil Company (Indiana) and Socony-Vacuum Oil Company are said to be forming a separate corporation for this project which is to include a line from Parco, Wyo., to a juncture between Cheyenne, Wyo., and Fort Collins, Colo. It is reported that this latter is a Sinclair tie-in with the main line.

Bolivian Pipe Line Work Scheduled After January 1

Actual laying of the 255-mile section of 6⅝-inch crude oil pipe line from the Choreti pool to Tintin in Bolivia will not begin until after January 1, according to Williams Brothers Corporation, Tulsa, who have the contract from the Yacimientos Petroliferos Fiscales Bolivianos, government company which will operate the line. The Tulsa company reports several parties are laying out the right-of-way over rugged, mountainous terrain and that access roads must first be built before the pipe can be moved in.

So far no change in plans have resulted from the recent revolution in Bolivia and members of the Williams Brothers Corporation crews were not molested, officials declared.

It was announced recently that the proposed pipe line would be carried 85 miles farther from Tintin to Cochabamba where a refinery will be built by the Foster Wheeler Corporation for the YPFB.

Illinois Contract Let

Midwestern Engineers, Tulsa, has been awarded a contract with North Shore Gas Company, Waukegan, Ill., for the construction of approximately 31,000 feet of 12¾-inch and 11,800 feet of 10¾-inch distribution lines, all in Lake County, Illinois.

Two New Stations Planned On Stanolind Trunk Line

Stanolind Pipe Line Company has placed orders for pumping equipment to install two new stations on its 16-inch trunk line that extends from Wasson and Slaughter fields, West Texas, to Drumright, Okla., where connection is made with its Mid-Continent system. New stations will be erected near Childress, Texas, and El Reno, Okla., and will boost the capacity of the line from 71,000 to 100,000 barrels daily.

This line average 71,360 barrels daily the past week, using the two field stations and a relay booster near Hobart, Okla. The new stations were originally scheduled for erection as a wartime measure.

Shell Pipe Line Company is currently routing 5000 barrels of Wasson and Slaughter crude daily through the Stanolind line to the Oklahoma terminal, where deliveries are made into the Shell's system. This movement supplements Shell's 47,100 barrels of daily runs from the Permian Basin to Oklahoma and points north.

Michigan Denied Permit To Buy Gas for Storage

The Federal Power Commission last week denied an application of Michigan Gas Storage Company for a temporary emergency certificate for permission to purchase natural gas from Panhandle-Eastern Pipe Line Company for sale to Consumers Power Company, but to meet immediate requirements of Consumers did authorize Panhandle-Eastern to sell the necessary amounts directly.

The application was based on contentions of the Michigan company that the Winterfield and Cranberry Lake gas fields, from which Consumers draw much of its supply, have been drawn down to low pressures which might affect their proposed future use for storage, and that the procurement of additional supplies was necessary.

The Commission held that it would not be appropriate to issue the temporary certificate until a final determination is made as to the most desirable and economic means of utilizing the two fields for storage.

Reynosa Would Build Line To Transport Export Gas

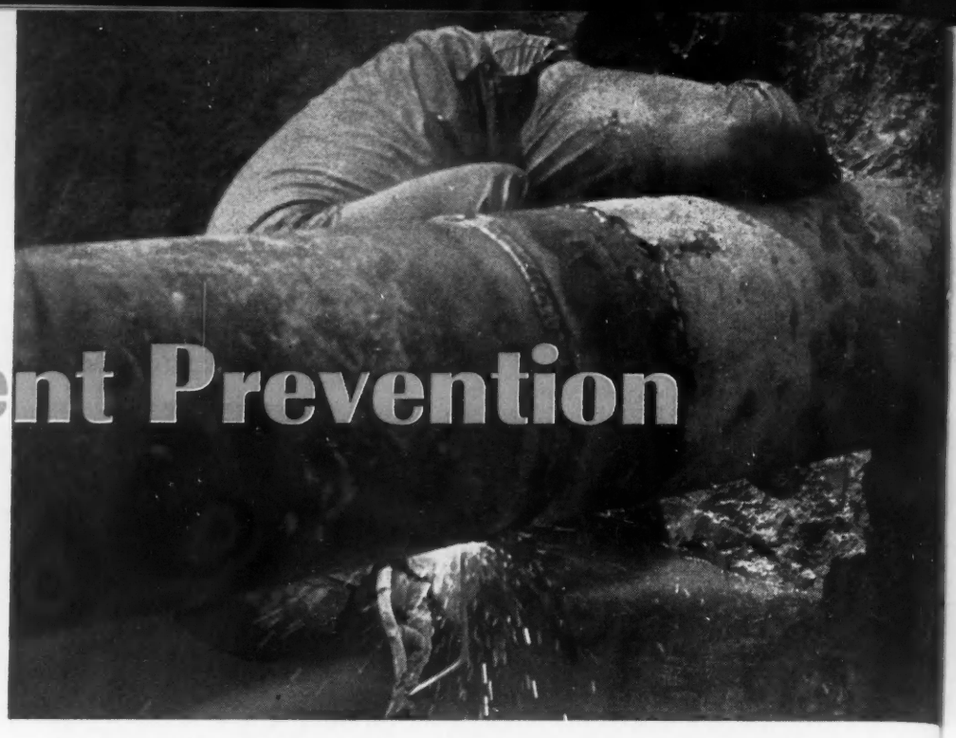
Reynosa Pipe Line Company has asked FPC for authority to construct a 30-mile 12-inch transmission line from the La Blanca field, Texas, through the North Weslaco field and South Weslaco field to the north bank of the Rio Grande River, where two 8-inch lines will cross to the international boundary, where the gas will be taken by Gas Industrial de Monterrey, S. A.

The company was given authorization in June to export up to 50,000 MCF daily of gas produced in the three Texas fields to the Mexican company. The gas is to be purchased in the fields from La Gloria Corporation. Cost of the proposed pipe lines and other necessary facilities is placed at $637,000.

Fundamentals of Industrial

Accident Prevention

Part 1



A difficult welding job. Work of this type requires not only safety interest but know-how.

THE advantages of a well-planned program of safety in improving operating efficiency, preventing waste, lowering costs and promoting better relations with employes and customers are well known to executives, supervisors, and workers. While safety programs will vary in accordance with the size of the company, the area of the territory covered and the organization set-up, there are certain fundamentals which are basic and which are common to all companies and all types of organizations.

This, and the series of articles which are to follow, has been prepared with the thought of discussing these more general fundamentals in order to promote an exchange of ideas and in an effort to provide the busy department head or foreman with material which may be useful in planning and administering the safety program and carrying on continuous safety training activities.

Comments, questions, and discussions will be welcomed by the Editors and the author and an effort made to publish such comments, questions, and answers or to publicize new Safety "wrinkles," unusual accidents and methods of control which will serve to promote the cause of safety in the oil and gas industry.

ACCIDENT prevention is a well established and accepted principle in industrial operations. It is no longer a question of whether safety is necessary, but a question of how it is to be accomplished.

More than thirty years of experience in the field of organized accident prevention has proven that accidents result from definite cause factors, most of which are controllable by the application of well known methods and techniques.

Safety problems are so closely related to other problems of personnel control, work procedure, training and job planning that accident prevention can not be successfully accomplished when carried on as a separate activity. Today, safety is recognized as an integral part of the operating program, and the operating personnel is relied upon to apply preventive measures by the same methods and through the same established set-up by which other phases of the operations are controlled.

The primary steps involved in setting up safety as a part of operating procedure are:

1. Proper design and layout of equipment.
2. The development and observance of standard specifications for mechanical guarding of physical hazards.
3. Selection of workers physically and temperamentally qualified for the job they are to perform.
4. Correct induction training and proper assignment to the job.
5. A definite schedule of inspection and maintenance for physical properties.
6. The development of safe work practices for the various jobs in the plant.
7. Training of workmen as to correct job methods.
8. Proper job planning.
9. Close supervision to insure that work procedures are safe and that instructions are carried out.
10. The provision and use by workmen of suitable personal protective equipment.

By analyzing each of these factors, it can readily be seen that they do not differ greatly from the measures of control which are relied upon for efficient accomplishment of other phases of operation. Also, it is evident that the major responsibility for accident prevention rests on the supervisory force. Because of his close contact with his men and knowledge of operations, the supervisor is in the best position to develop safe working methods, to instruct, to observe and to correct.

Department Heads and Managers

Responsibility for incorporating safety into the operating "set-up" rests directly with department heads, superintendents and district managers who are charged with recruiting, organizing and directing the activities of the field and plant personnel. The first requisite to the success of safety work is a sincere interest. Unless the department head or manager is thoroughly sold on the benefits of accident prevention he cannot hope to win support for the work from his subordinates.

Following are the phases of the safety program, which are under the direct supervision of the supervisor:

1. Planning and conducting foremen's meetings.
2. Planning and conducting safety meetings.
3. Provision of suitable working tools and equipment.
4. Provision of adequate protective equipment.
5. Training foremen in the management of men.

Foreman's Place in Program

The foreman is the most important link in the safety chain. In the final analysis the program succeeds or fails according to the interest and effort that he puts forth. He wields a greater influence over his own men than does anyone else in the organization, and if he shows by his attitude and manner of conduct that he is for safety, he will

By
C. L. HIGHTOWER,
Safety Director,
United Gas Pipe Line Company and
Union Producing Company

convince his men that it is a necessary part of their work, and will win their support for it. If, on the other hand, he is opposed to the work or shows indifference, the same lack of interest and disregard for safety will be evidenced by his men.

The foreman's safety duties may be summed up as follows:

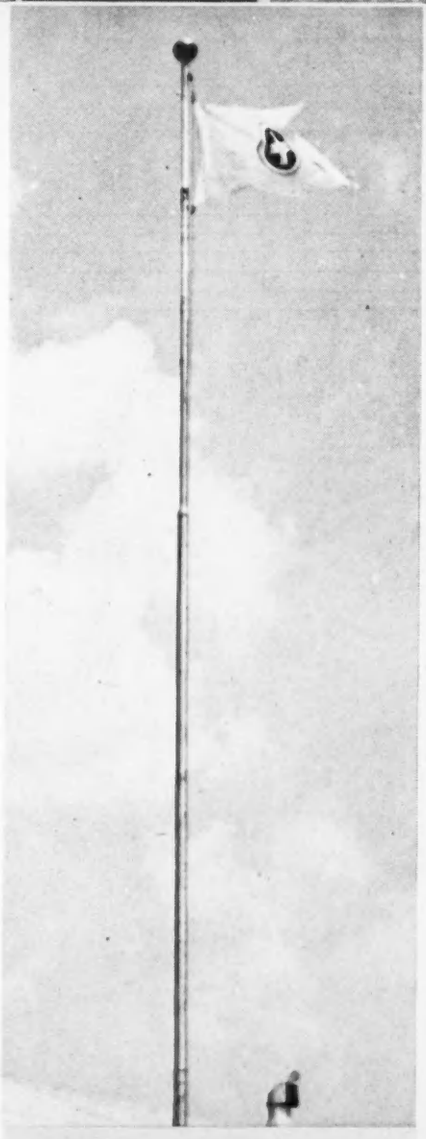
1. Selection of mentally alert, honest and dependable workers who are physically qualified for the work to which they are to be assigned.
2. Proper assignment of men to the job, giving detailed instructions as to job performance and explaining probable hazards and safety precautions to follow.
3. Provision of safe tools and equipment.
4. Provision of protective equipment, and follow-up to see that it is used in the correct manner.
5. Planning the work to see that men, materials and equipment are available to complete the job with safety in the time alloted.
6. Active participation in foreman's and safety meetings.
7. Personal supervision of all hazardous work, or work that is new and unusual.
8. Adherence to a regular schedule of inspection and maintenance of physical properties to insure that good housekeeping practices are followed and that mechanical failures do not occur.
9. Personal investigation of all accidents and the correction of any unsafe practice or condition revealed by the case in point.
10. Investigation and report of "no-injury" or near accidents, with the view of determining the cause and taking corrective action.
11. Constant observation of work procedures in order to detect and correct unsafe practices and conditions, and with the thought of developing improved methods of work.

Worker's Part in Program

The individual employe is constantly on the "firing line" and because of his knowledge of the work is in the best position to "spot" accidents causing conditions and practices and suggest remedial measures. It is evident, therefore, that the knowledge and help of the individual is necessary to a well rounded program. It is also true that the interest and enthusiasm of the workers can be more easily maintained if they are given a job to do—a place on the inspection committee, the responsibility of reporting on a hazardous situation, or a part in the safety meeting.

The worker's part in the safety program includes:

1. A proper attitude towards the work, appreciating the seriousness of accidents and the need for safety, both on and off the job.
2. Active participation in all safety meetings.
3. Warning the new man of probable hazards and showing him the safe way.
4. Reporting unsafe practices and conditions, which he can not himself correct, to his foreman as promptly as possible.
5. Reporting all accidents, no matter how minor, and receiving first aid treatment.
6. Qualifying to render assistance in injury cases by taking the company's first aid training course.
7. Sufficient sleep and rest, following temperate living habits and keeping physically fit and mentally alert.
8. Keeping informed on his job.
9. Cooperating with fellow workers, the foreman, and all employes of other departments.



Camp safety and sanitation are important considerations. Wide streets and well-kept lawns, as shown in top photo, help to promote cleanliness as well as accident and fire prevention.

The flying safety flag, lower photo, indicates no disabling injuries for the month. When there is a lost-time accident the flag is lowered, denoting that the record is broken. This is one of the plans used in maintaining employe safety interest.

Safety Department Activities

The Safety Department is essentially a service department. It does not outline work procedures, issue instructions or in any way exercise control over the operating personnel. The Safety Department may suggest or recommend changes in work procedures or the correction of physical hazards, but it does not command. To do so would be contradictory to the principle of building safety into the operating "set-up," and such assumption of authority that rightfully belongs to the operating supervisor would only bring about discord.

It is the duty of the Safety Department to outline a program of safety activities, supervise the distribution of first aid supplies, establish uniform guarding practices, and assist in the development of safe work practices. No effort should be made to force this service on the operating department, however. The adoption of the program should be accomplished by selling department heads

A competitive spirit is developed between departments through the use of the accident scoreboard which shows the monthly record of each major operating unit.

and managers on the practicability of these measures and by pointing out the advantages that will accrue by reason of improved accident experience and increased efficiency.

While there is considerable variation in the functions of Safety Departments, the services they may provide can very properly include:

1. Collaboration with the Medical Department in supervising the physical examination program, which includes the appointment of examining physicians and checking of completed examination reports for discrepancies.
2. Handling the purchases and distribution of all first aid supplies.
3. Developing standard specifications for protective equipment and approving all purchase orders covering such equipment.
4. Preparing annual schedule of foremen's and safety meetings to insure that they are held regularly.
5. Outlining programs for safety meetings, and preparing and distributing material for use in conducting such meetings.
6. Publishing monthly paper sent to all supervisors, which features discussions on foremanship problems and serves as an outline in preparing foreman's meeting programs.
7. Preparing safety material for use in company magazine.
8. Supervising safety poster service—making selection of posters and distributing them to the field.
9. Developing and directing "no accident" contest and other special campaigns directed towards maintaining the employes' active interest in safety.
10. Conducting first aid training classes for employes.
11. Assisting in the preparation of foremen's and safety meeting programs by consulting with managers and safety council chairmen, suggesting subject material and taking part in the programs when requested.
12. Investigating and reporting on all personal injury and automobile accidents occurring, submitting recommendations for the removal of the condition or practice responsible to the supervisor in charge.
13. Maintaining accident comparison reports and attempting to develop friendly spirit of rivalry between operating units through the release of comparative accident figures and contest bulletins.
14. Following up on illness and non-occupational accident cases to see that employes do not suffer from lack of medical attention or because of financial distress.
15. Collaboration with other departments in rehabilitating injured employes.

This well-pumping unit is equipped with a well-built ladder which has a top support ring for the safety of the worker and to give him free use of both hands while lubricating the walking beam. Guards and equipment which add to the safety and convenience of the worker indicate the supervisor's sincerity in the safety program.

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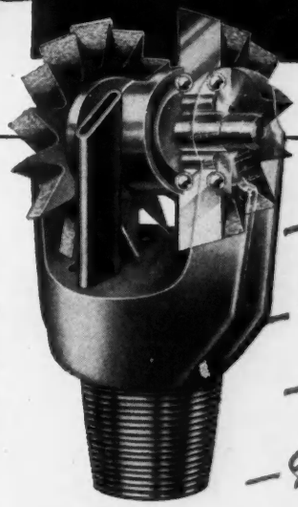

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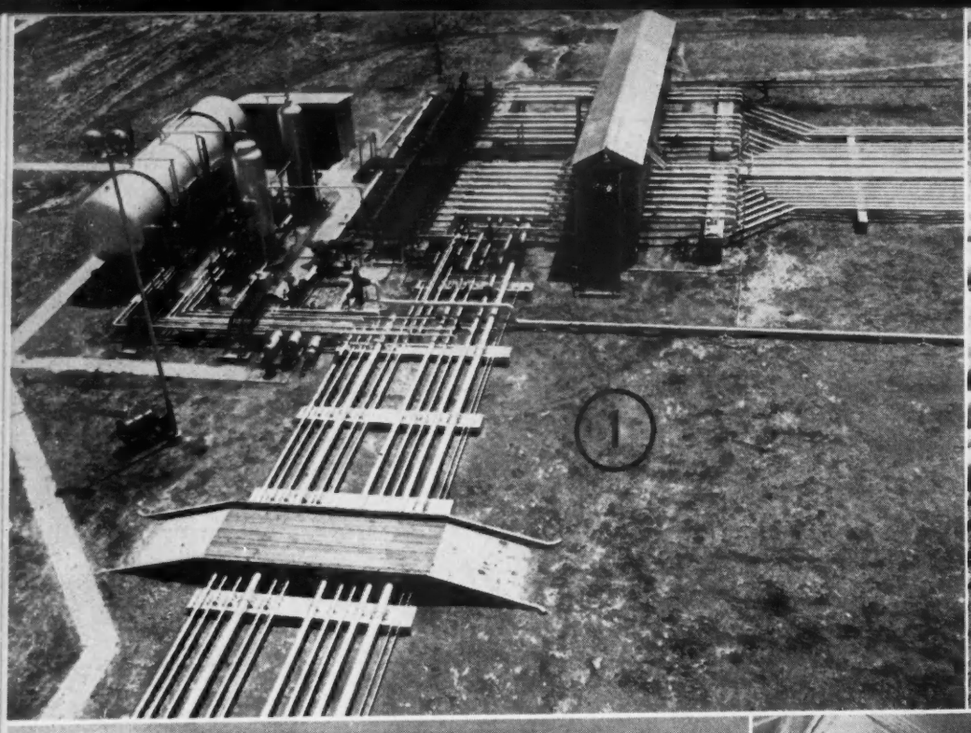
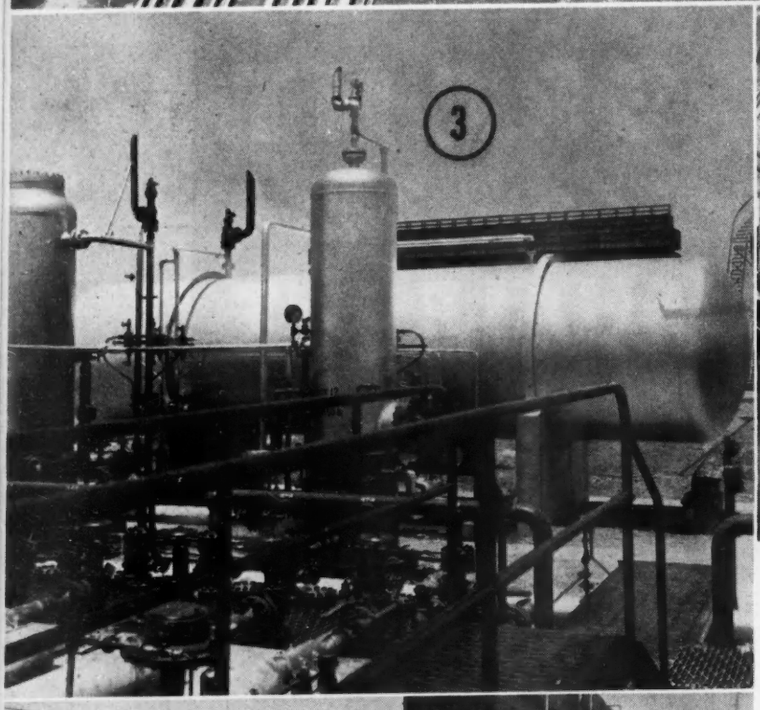
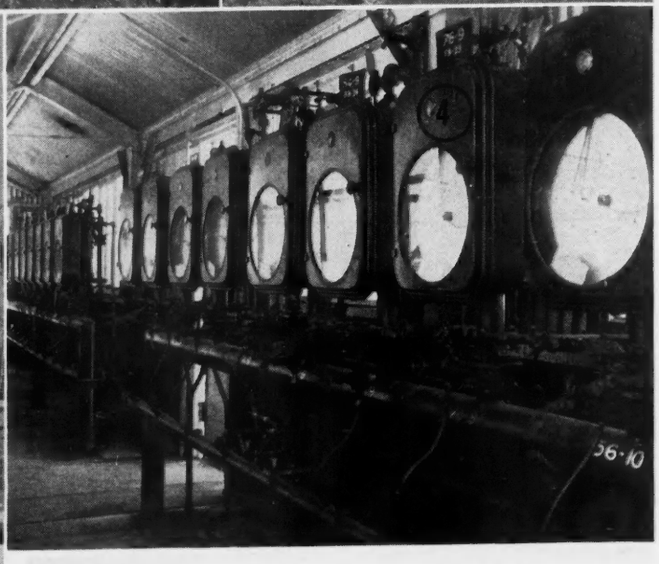
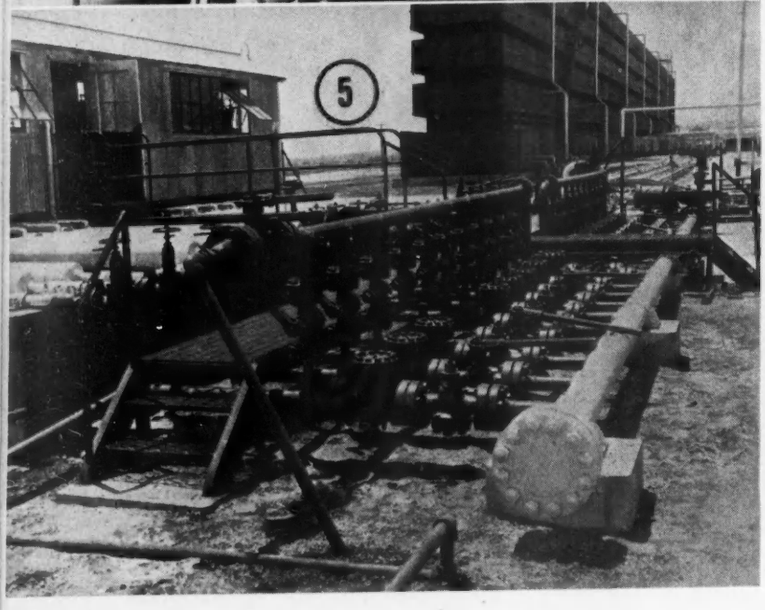


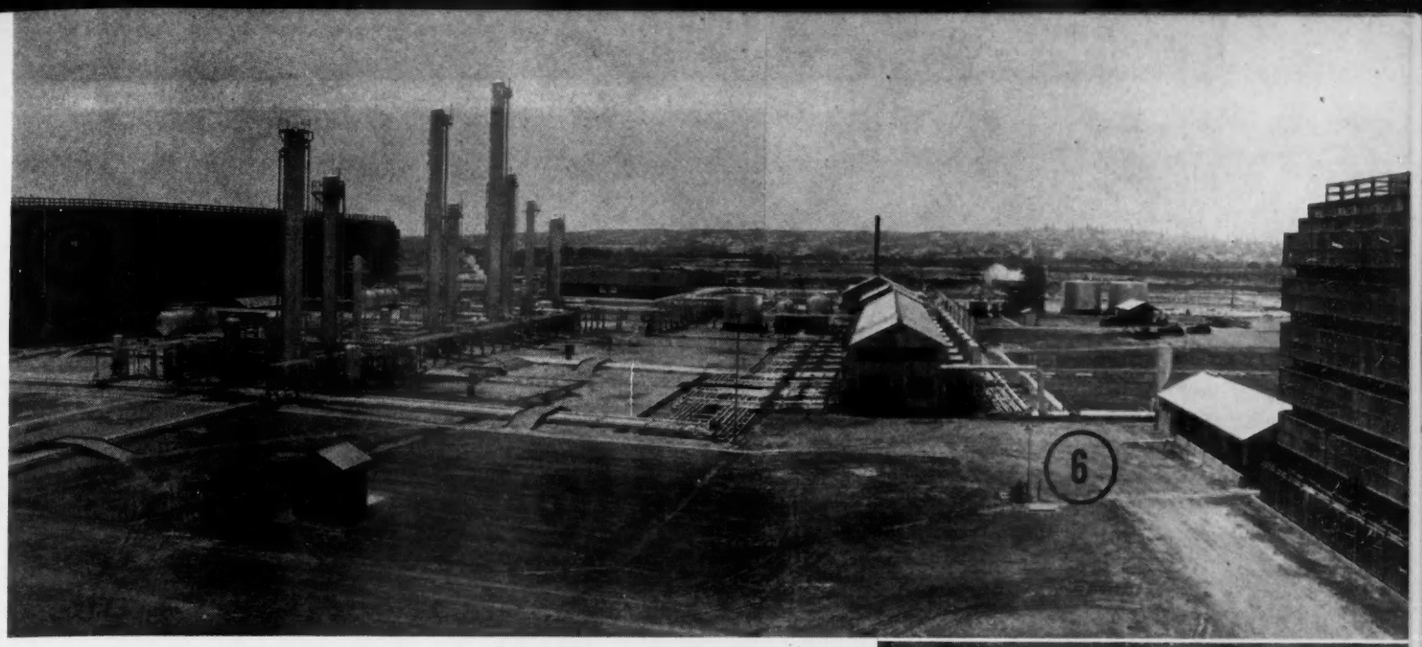






South Coles Levee

Pressure Maintenance And Cycling Project



By L. P. FOOTE,
Division Manager,
The Ohio Oil Company

THE South Coles Levee field is about 25 miles southwest of Bakersfield in Kern County, California. It has a known areal extent of about 3600 acres.

The field was discovered as a result of seismograph exploration and the completion of The Ohio Oil Company's KCL-F No. 1 on November 11, 1938. This well is in the eastern part of 10-31s-25e, and is now known as SCLU 74-10. Initial production was 885 barrels of clean, 44.5-gravity oil and 5,600,000 cubic feet of gas. Top of the producing zone in this well was at 9240 feet and total depth is 9365 feet.

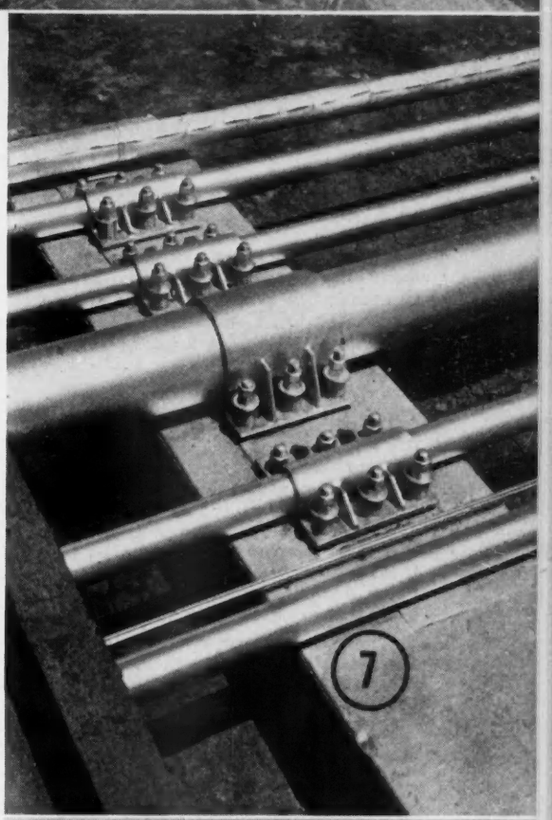
Core analysis and interpretation of the electric log resulted in the identification of the producing formation as the Stevens Zone. The Stevens Zone was first discovered and named by Shell Oil Company in the Ten Section field. This zone is of the upper Miocene age, and consists of sands of varying permeability, containing many lenses of shale and silt, few of which have any appreciable areal extent. Permeability of the sands ranges from almost zero to more than 1000 millidarcys and shows no regularity of gradation from well to well. Porosities average about 20 percent. The Stevens Zone has been found productive in the following major oil fields: Canal, North Coles Levee, South Coles Levee, Elk Hills, Greeley, Paloma, Strand and Ten Section.

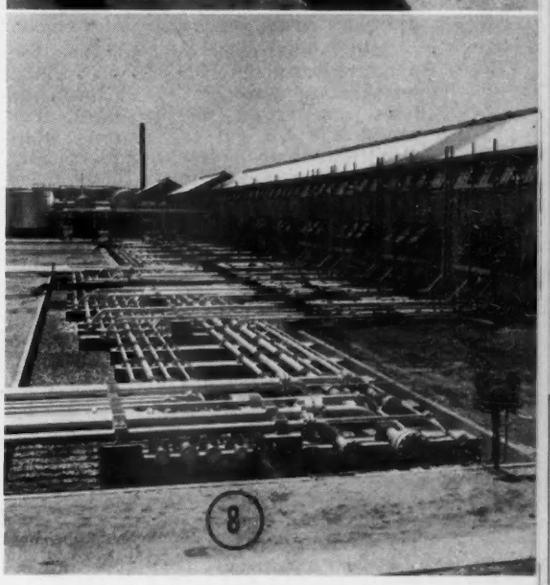
The South Coles Levee structure is anticlinal with the main axial trend being almost due east and west. Little is known regarding the structural closure west of the crest. Inasmuch as the sands become too tight to be productive a short distance west of the structural high, no wells have been drilled to delineate the structure in this area.

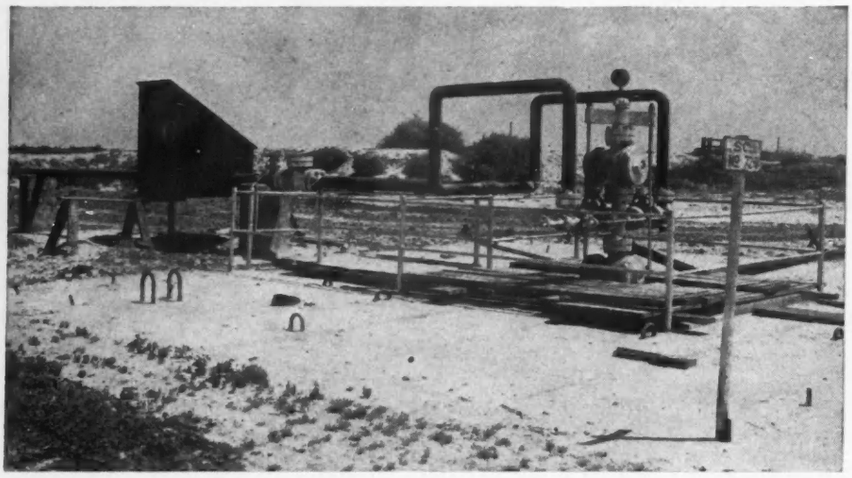
Top of the producing zone was reached at about 8400 feet in the highest wells and at 9963 feet in the lowest producing well. Productive sand thickness

This paper was given at the July meeting of the California Natural Gasoline Association. It is presented here in slightly abridged form.

1. **Production from all wells flow at well-head pressure to a point near the south-east corner of the plant. Effluent from each well flows through its meter house, steam-jacketed heater, blow bean, check valve, and into production header. Well lines come in from upper right. Test separator plant at left. Six-foot wide ramp in foreground permits full width vehicles to pass over surface lines.**
2. **One of the five emergency plant shut-down stations which operate at 25-pound air pressure. Primary system shuts down processing equipment and secondary shuts down utlity equipment. Cams on valves allow operation only in proper sequence.**
3. **Closeup of test separator installation into which production from any well may be directed for complete 24-hour test and analysis, passing through 1500, 450 and 60-pound separators. Liquid is accumulated and measured in the 60-pound horizontal trap. Routine three-hour gas-oil raito tests are made monthly and if change is noted, samples are taken for complete laboratory test.**
4. **Interior view of meter house showing orifice recording meters which measure gas flow from each well as lines enter plant area. Steam-jacketed lines below meter house prevent freezing of hydrate in orifice fittings.**
5. **Into this header comes production from all wells at full well-head pressure. View shows meter house at far left, steam jacketed lines, beans, valve header and check valves. Large air-operated gate at extreme right is closed off by emergency plant shutdown system, cutting off well production from plant.**
6. **Panoramic view of central portion of South Coles Levee cycling plant looking west. Process cooling tower is at left, jacket cooling tower at right. Plant is designed to handle 60 million cubic feet of gas daily, with a maximum injection pressure of 4000 pounds per square inch.**
7. **Close-up of one type of special spring-loaded line clamps which permit expansion only in the longitudinal direction. Note bearing plate embedded in two-foot wide concrete pier.**
8. **Pipe vibrations in these 1400 and 1500-pound discharge lines have been eliminated by use of special pipe clamps instead of expansion loops; frequent pier spacing; large diameter lines resulting in gas velocities of only five to six feet per second; large suction and discharge chambers; and pulsation dampeners.**







One of the five injection wells in the South Coles Levee Field, located along the high of the structure. A check valve and expansion bends are standard quipment at each injection well. Injection system is designed for 4000 pounds at 180° F.

ranges from about 100 feet to more than 400 feet.

Development of the field proceeded in an orderly manner, and by February, 1942, 55 wells had been drilled by the five operators in the field. These operators are The Ohio Oil Company, Richfield Oil Corporation, Standard Oil Company of California, Tide Water Associated Oil Company and Union Oil Company of California.

67 Completed Wells

There were no wells drilled during the remainder of 1942 or in 1943. Development was resumed in April, 1944, after the consummation of the South Coles Levee Unit Plan. Since that time, 12 wells have been completed, bringing the total of completed wells to 67. Of this number, only two dry holes have been drilled, namely, 56-2 and 72-14, both of which are outside the unitized area.

Development of the field has shown that its area is divided almost equally between black oil and condensate production. The condensate area occupies the higher parts of the structure down to a depth of 9300 to 9400 feet. Wells completed below this depth produce black oil. Most of the wells in this latter group are in the eastern half of the field.

Under initial reservoir conditions, the pressure was about 4200 pounds, and the temperature was 235° F. Laboratory tests performed on recombined trap samples of the gas cap material indicated that these hydrocarbons probably were in the gaseous phase under these conditions. The material exhibited retrograde characteristics, and seemed to be at the dew point. Initial producing gas-oil ratios were about 10,000 cubic feet per barrel, and the gravity of the liquid was sometimes as high as 60.

Oil from the black oil area averages about 35 gravity and under initial conditions producing gas-oil ratios were about 1000 cubic feet per barrel. It is believed that the oil was at the bubble point under initial reservoir conditions.

As soon as the character of the gas cap material was recognized, the operators in the area began to give consideration to the feasibility of gas cycling to prevent loss of liquid recovery, due to pressure decline in the reservoir. It was decided that a study should be made to determine the best possible course to follow in producing the field.

This study was delegated to a group of petroleum engineers and geologists, representing the various operators in the field. All available pertinent data were assembled for a thorough analysis. These data included well logs, histories, core analyses, subsurface pressure records, production tests, pressure vs. temperature report, etc.

Results of the study indicated that most of the evidence favored the institution of a cycling program for the gas cap. This was to be carried on concurrently with a pressure maintenance program in the black oil area.

Engineering and geological studies were reviewed with great care by the field operators. The result was that the operators agreed that unitization of the field was necessary in order to carry out the cycling and pressure maintenance plan in the most efficient manner.

Having agreed that unitization was necessary and advisable, the five operating companies, after some months of negotiation, formulated and executed, with the consent of their common lessor, the South Coles Levee Unit Plan.

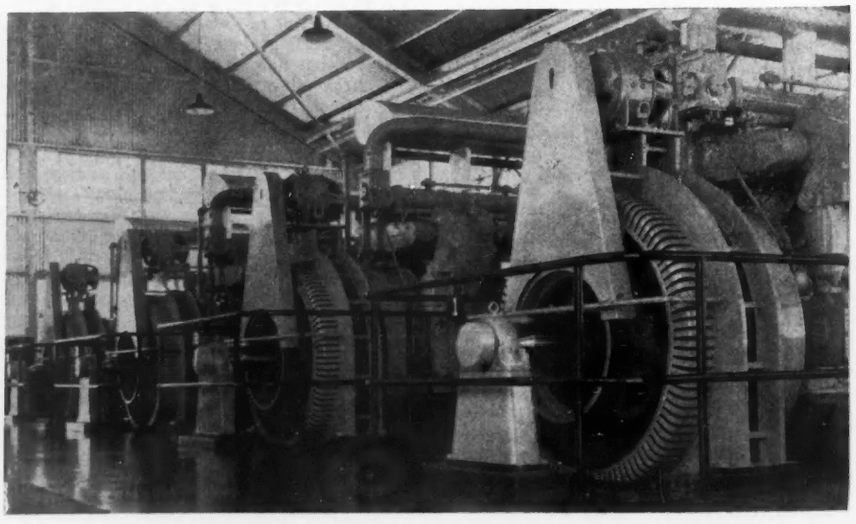
In the administration of the unit, the five participants, each acting through its duly appointed representative, make all determinations of a major character, such as the time and location of the drilling of additional development wells; designation of wells to be used for production and those to be used for injection; the cost, nature and size of any plants, facilities or equipment, other than wells; the purchase of make-up gas; the abandonment of wells; change of operator; and any additional matter or matters necessary or proper in accomplishing the objectives of the agreement. All such determinations are made by vote of the participants, each acting through its duly appointed representative. Subject to and in accordance with the directions and instructions of the participants, the operator performs all operations respecting the unit zone within the participating lands, including the drilling and operations of wells, and the construction, maintenance and operation of plants and other facilities. The Ohio Oil Company is the operator designated in the unit plan.

Plan Inaugurated

The South Coles Levee Unit Plan went into effect on March 1, 1944. Prior to this date, while negotiations were progressing toward unitization, the petroleum engineers, plant engineers and geologists of the five operators were in almost continual session. These men were working out the many technical problems involved in getting field operations coordinated, and in laying out the plans of operation.

Tests were made on all gas cap wells to determine the amount of wet gas available at various well head pressures. The information obtained from these tests was essential to the plant engineers for plant design purposes.

Estimates of the amount of available gas from the black oil area were necessary and had to be projected into the future, since it was planned that the



Four gas-engine driven, 250 kilowatt, 2300-volt A.C. generators provide dependable plant power. Three units normally carry bulk of load, with sensative hydraulic governors cutting in the fourth unit to pick up additional load.

plant should be so designed that it would become an integral part of the production program for the field, and not primarily a gasoline plant.

A development plan for the field was worked out in an attempt to provide an adequate drainage pattern with as few wells as possible. Since the field had been developed in a more or less competitive manner, there were more wells than necessary in some areas, and not enough in others.

Injection wells had to be chosen, injection pressures estimated, and well head equipment, casing and tubing strings inspected and analyzed for the purpose of determining if the equipment were adequate to operate under injection conditions.

Laboratory analyses of representative well streams were necessary to aid the plant engineers in working out process problems.

Various systems of laying out injection lines and flow lines were considered from the standpoint of efficiency and conservation of critical materials.

Conclusions Reached

From these investigations, the following conclusions were reached, and approved by the field operators:

1. A cycling plant should be built, capable of processing about 50 million cubic feet of gas cap gas and 10 million cubic feet of black oil gas.
2. Initial plant intake pressures should be 1500 pounds for gas cap gas, and 450 and 60 pounds for black oil gas.
3. The plant should be designed for 4000 pounds injection pressure, although it was estimated that 3750 pounds would probably be the maximum pressure required.
4. Five injection wells were chosen. Analysis of well equipment showed that three of them would need additional work to equip them for injection service.
5. It was decided that the field injection system would consist of a main injection header with laterals running to the individual wells.
6. The production system from the gas cap wells to the plant would consist of individual flow lines, with regulating and metering facilities at the plant.
7. The plant should be capable of producing the following products: propane, iso-butane, normal butane, natural gasoline, de-butanized condensate.

The foregoing program has been fulfilled in all respects. The originally proposed drilling program has been changed from time to time to meet newly discovered conditions. The status of the 67 wells completed to date is as follows:

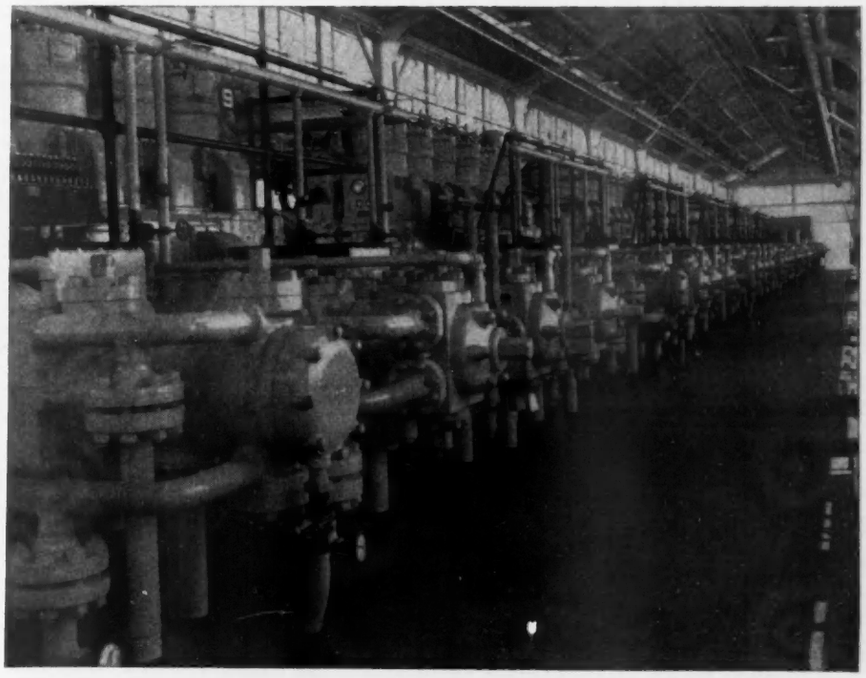
Black oil wells	38
Condensate wells	21
Injection wells	5
Idle, non-commercial wells	1
Abandoned wells	2
Total	67

Cycling Plant

The flow cycle for the cycling plant was developed by the plant engineers. This group is composed of engineers from the participating companies who were appointed by the managers of their respective companies.

The plant engineers' first assignment was to develop a flow cycle for a cycling plant to handle 50 million cubic feet per day of flash gas from the condensate area, and 10 million cubic feet per day of black oil production gas. This work was started in January, 1943. It was also completed and submitted to the contractors for bids in January, 1944. It was also the duties of the engineers to select the plant equipment and also to analyse the bids received from the contractors. The results of the analysis of the contractors' bids were submitted to the managers group who selected the contractor.

The contract for the construction of the cycling plant and field lines was signed in September, 1944, and the construction work started at that time. The plant was completed and placed in operation on November 24, 1945.



View of interior of compressor house containing nine 600 horsepower, two-cycle, gas engine driven compressors. Application of super-compressability factor, a deviation from Boyle's Law, made possible a material reduction in size of the compressor plant.

Absorption Type

The plant is of the oil absorption type with a processing capacity of 60 million cubic feet per day of wet gas. Under present operating conditions the overall plant recovery is 98 percent of the normal butane, 88 percent of the iso-butane, approximately 30 percent of the propane and all of the pentane and heavier fractions at present load conditions.

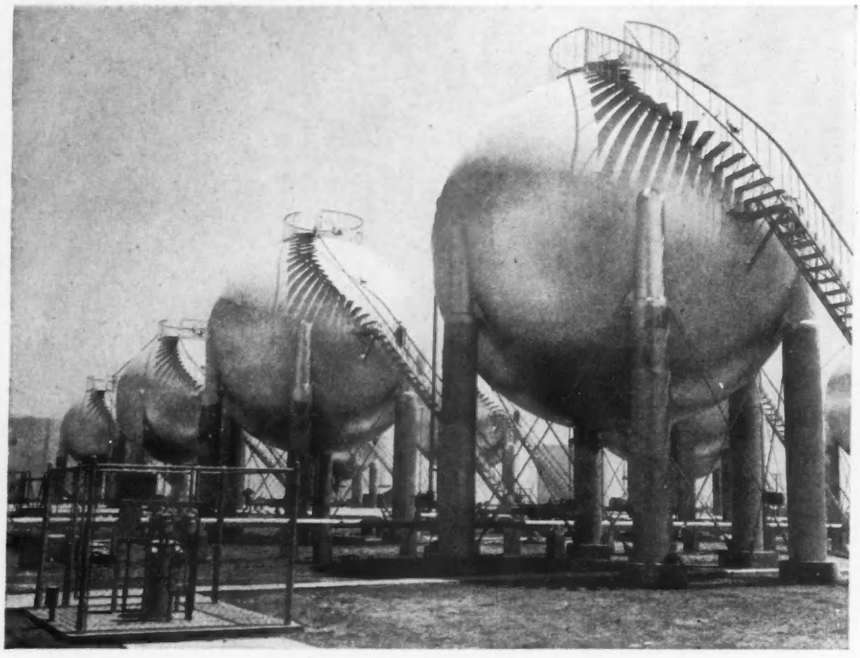
Approximately 45 million cubic feet per day of wet gas enters the high pressure absorbed operating at 1500 pounds. The gas rate to the high pressure reabsorber is 15 million cubic feet per day. This vessel operates at 450 pounds. The low pressure reabsorber operates at 175 pounds and processes approximately 1 million cubic feet per day. The residue gas from the 450-pound reabsorber and the 1500-pound absorber amounts to approximately 54 million cubic feet per day. This gas is taken through the gas engine driven compressor units to the injection wells. The gas from the 175-pound reabsorber is burned as plant fuel.

At rated capacity the plant is expected to recover approximately 7000 barrels per day of liquefied products, namely, 4650 barrels of 50° A.P.I. debutanized condensate, 715 barrels of natural gasoline, 660 barrels of normal butane, 440 barrels of iso-butane and up to 600 barrels of propane.

Field System

The field line system is designed to transport the gas from 16 producing wells to the plant. However, the number of producing wells will increase as the drilling campaign is completed. Each production well has a separate flow line to the plant where the well effluent is measured through an orifice meter. The production lines are of three-inch and four-inch Grade B pipe. The maximum pressure drop allowed in any producing line is 100 pounds from the well to the plant. The longest production line is 7000 feet. The production lines are designed for a working pressure of 3000 pounds at 160° F. These lines operate at full well head pressure with all pressure reduction taken through a flow bean at the plant. It was thought not advisable to take any pressure reduction and consequent temperature reduction at the well because of the possibility of hydrate formation. All production and injection lines are insulated and carried on concrete piers with expansion loops approximately every 1000 feet.

The injection system is of the main header type, a single line running through the field with branches to each injection well. An orifice meter is installed on each of the branch lines. The injection wells are located along the high of the structure. The injection system is designed for 4000 pounds at 180° F. Each injection well is equipped with a check valve at the well head. The branch lines to the injection wells are of three-inch and four-inch pipe. The main injection header is eight-inch, Grade B, 1⅛-inch wall pipe at the plant,



Propane, iso-butane, normal butane and other plant products are stored in eleven various-sized spheres located in the eastern portion of the plant.

and grades down to four-inch Grade B, Schedule 120 pipe. Expansion bands are installed at every well, both production and injection, to eliminate the possibility of transmitting any stress from the lines to the well heads.

High Pressure Gas System Within the Plant

The production gas arrives at the plant at pressures varying from 1800 pounds to 2600 pounds and temperatures from 110° to 140° F. The pressure is reduced to 1800 pounds by passing the gas through a flow bean before it reaches the production header. This header is designed for a working pressue of 3000 pounds. In the production header all the condensate wells' effluent is commingled. The gas and liquid then flow through a pressure reducing regulator which is controlled by the pressure in the 1500-pound absorber residue scrubber. The purpose of this regulation valve is to reduce the pressure to 1500 pounds and hold a constant pressure on the high pressure absorption system. After passing the pressure reducing valve, the gas flows through cooling coils where the temperature is reduced to 90° F. From the coolers the gas flows to the high pressure gas separator which is 54 inches in diameter by 15 feet high, with a design working pressure of 1600 pounds. The liquid continues into the fractionation system. The gas from the 1500-pound separator flows directly to the high pressure absorber, which is 66 inches in diameter by 75 feet high, having a shell thickness of 3-7/16 inches. This vessel has 30 trays on 24-inch centers. Here the gas in contacted with sufficient absorption oil to get the desired recovery of the heavier hydrocarbons. The gas then flows into the high pressure residue scrubber before going to the second stage repressure compressors. The high pressure absorber residue scrubber is equipped with a mist extractor, high liquid level alarm and a high liquid level shutdown switch to ground the magnetos on the compressors. Any liquid carry-over from the high pressure absorber is thus prevented from reaching the compressor cylinders. This feature is also installed on all compressor suction scrubbers. After leaving the high pressure compressor cylinders the gas is cooled from 225° to 165° F., and is returned to the sand through five injection wells. A check valve is installed in the injection line near the plant to prevent any back flow of gas from the injection line should this system fail in the plant. The compressors are installed to deliver 54½ million cubic feet per day of absorber residue gas to the injection system at 4000 pounds. The eight installed compressor services vary in suction pressures from 6 inches vacuum to 1500 pounds and in discharge pressures from 30 pounds to 4000 pounds.

Black Oil Production Gas

Gas from the black oil production is brought to the plant at three different pressures; namely, 450 pounds, 60 pounds, and 6-inch vacuum. The 450-pound black oil gas flows to the 450-pound separator where it commingles with the condensate flash gas. The mixed gas stream flows into a high pressure reabsorber which is 60 inches diameter by 63 feet high, with 24 trays on 24-inch centers. The bottom section of this vessel is used as a 450-pound flash tank for the rich oil from the base of the high pressure absorber. In this vessel, the combined gas stream is contacted with the required absorption oil. The gas then flows to the 450-pound reabsorber residue scrubber before going to the first stage repressure compressors, which have a suction pressure of 430 pounds and discharge pressure of 1510 pounds. From here the gas flows through a cooling coil where the temperature is reduced from 275° to 90° F., and thence to the high pressure absorber residue scrubber. Here it is mixed with the residue gas from the high pressure absorber.

The 60-pound black oil gas flows into the 60-pound trap as does the condensate from the 450-pound trap. Here the 60-pound black oil gas is commingled with the flash vapors from the 60-pound condensate. This 60-pound trap also serves as the liquid charge tank for the crude debutanizer column. From here the gas flows to the first stage of the low pressure gas compressor and is compressed to 180 pounds. The gas is again boosted, after cooled, and flows through a final accumulator to the 450-pound reabsorber. To complete the compressor services, the fixed gases from the stripper reflux accumulator, the hot rich oil vent tank, and the crude rectifier reflux accumulator are commingled. These three gases are at approximately the same pressure, which renders them suitable for one compressor service. The first stage recompressor picks up the combined three streams at 70 pounds and discharges at 190 pounds. Before this gas enters the cooler, the overhead liquids from the stripper and crude rectifier are blended with this gas for the sponge effect. From this cooler, the liquid and gas goes to the depropanizer charge tank which also serves as a gas separator for the second stage recompressor. This service takes the gas at 185 pounds and discharges at 450 pounds. The gas then flows through a cooler, an accumulator, and thence to the 450-pound reabsorber.

One compressor cylinder handles vapors from the black oil storage tanks in the field and from the debutanized condensate storage tanks at the plant. This gas is taken through the vacuum gas liquid accumulator, thence through two stages of compression to the 175-pound reabsorber. The residue gas from this vessel flows directly to the plant fuel system. The 175-pound reabsorber vessel is 36 inches in diameter by 38 feet high, and has 16 trays on 18-inch centers.

Electric Generating Plant

To have available a dependable source of plant-power and to eliminate the installation of small internal combustion engines in hazardous areas an electric generating plant was built. In the generating plant there are four 250-kilowatt, 2300-volt A.C. generators. These generators are driven by eight-cylinder, four-cycle gas engines which operate at 400 revolutions per minute. To maintain constant speed, the fuel to each engine is controlled by a sensitive hydraulic governor. The governors have the speed droop feature. Three of the governors are set with some speed droop and one is set with no speed droop. The engine with no speed droop setting normally carries a small load. When additional load comes on the line, this engine picks it up immediately. Consequently, the low voltage period caused from additional load is short.

The main switchboard is of the metal-clad dead-front type. Leads from each generator are equipped with reverse power relays. Should an engine die, its generator is automatically disconnected from the main buss to prevent motoring. The main board is equipped with automatic synchronization, individual voltage regulators, and remote speed control.

For further protection, an undervoltage relay is installed in the power

circuit to the pipe line pumps. Should the voltage drop to 2000 volts, these pumps drop off the line and do not come back until reset by hand. The generators and drivers were selected so that any three can carry the full plant load. Most of the electricity is consumed at 2300 volts by the cooling tower, jacket water, and pipe line pump motors. The electricity is distributed through the plant at 2300 volts in underground transite conduits, which are encased in red concrete for protection and identification. All motors, 50 horsepower and above, operate at 2300 volts and those less than 50 hp operate at 440 volts. Transformers are located throughout the plant where voltage reduction is necessary.

Cooling Towers

Separate atmospheric cooling towers are installed, one for jacket water cooling and one for process cooling. The jacket water cooling tower is 53 feet high and 132 feet long. This tower is designed to cool 5100 gallons per minute of water from 103° to 88° F. when the wind velocity is 1 mile per hour and the wet bulb 75° F. The jacket water cooling tower is used to cool the engine jacket water and the engine lubricating oil cooler water. The heat load on this tower is 38 million British thermal units per hour.

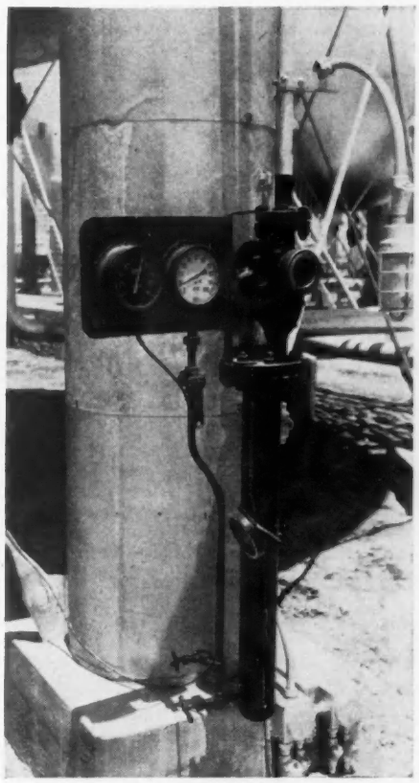
The process cooling tower is 55 feet high and 534 feet long and is designed to cool 9000 gallons per minute of water from 96° to 80° F. when the wind velocity is 1 mile per hour and the wet bulb 75° F. All the gas cooling coils, overhead vapor condensers, and liquid coolers handling hydrocarbon products are installed in this tower. The heat load is 70 million Btu per hour.

Compressors

In the compressor building there are nine 600-horsepower two-cycle, gas engine driven compressors. Each machine has four compressor cylinders and serves two or more services. The compressor cylinders are so arranged that there are one 1500-pound cylinder and one or more 4000-pound cylinders on each machine. The remaining throws are fitted with low pressure cylinders. This arrangement was necessary to keep the two high pressure services in balance from a capacity standpoint. All cylinders on the power and compressor ends are porous chrome lined. All rod packing is of the metallic bronze type. The compressor piston rings are of various materials; namely, micarta, cast iron, tinized cast iron, and bronze.

Button head grease gun fittings are installed on the oil lines from the lubricators to the piston rod packing. Should the rod packing heat, either when breaking in or because some foreign material has lodged under the packing, the operator attaches a grease gun to the button head fitting and flushes the packing with oil. This washes out the for-foreign material or cools the packing. The 1500-pound and 4000-pound cylinders are lubricated with a compounded oil.

The most unusual part of the compressor plant, from a design standpoint, is the suction and discharge piping. There are no expansion loops in the piping. The concrete piers are spaced from six to eight feet apart and the pipe is securely fastened to each pier with special type clamps. The direction of the pipe movement determines the type of clamp used. There are three types of clamps installed: first, the anchor type, which is used to fasten the pipe rigidly to the anchor pier and does not allow movement in any direction; second, the linear expansion type, which allows the pipe to move longitudinally only, and is identical with the anchor type except that the tie-down bolts on one side are spring loaded; and third, the box type, which is a rectangular clamp with the anchor bolts spring loaded on one side to allow both longitudinal and lateral movement of the pipe.



Automatic, gas-tight sight gauges are provided for all spheres in which are stored plant products.

All headers, both suction and discharge, which run the full length of the compressor building are securely anchored at the midpoint. As the temperature of the suction and discharge streams increases, these lines are forced to expand both ways from the anchor point. All other clamps on the headers are of the box type to allow the pipe to move longitudinally with temperature change and laterally as the lead-in and lead-out lines expand or contract. The box type clamps are also used on the compressor suction and discharge lines between the compressor building and the headers. Where a line changes direction, the box type clamps are used on the first two piers on either side of the corner.

Pipe vibrations in the 4000-pound and 1500-pound discharge lines have never been apparent. This was accomplished by the incorporation of five separate ideas in the design of the compressor piping:

1. The elimination of expansion loops by using the special pipe clamps.
2. Short pier spacing to keep all heavy valves and blind flanges close to supports.
3. Large suction and discharge lines which result in low gas velocities of from five to six feet per second in the high pressure discharge lines.
4. Large suction and discharge chambers located close to the compression cylinders. The following chamber volumes were used (all volumes are stated as cylinder volumes): 1500-pound suction, 19 volumes; 4000-pound discharge, 19 volumes; 450-pound suction, 12 volumes and the 1500 pounds discharge, 12 volumes.
5. The installation of a patented type pulsation dampener on all cylinders discharging at 1500 pounds and 4000 pounds. One pulsation dampener takes care of from one to three cylinders depending upon how the cylinders are manifolded.

Supercompressibility Factor

It is quite apparent that at high suction and discharge pressures supercompressibility must be considered when calculating the volumetric efficiencies of the compressor cylinders. This is illustrated by Table 1, the data of which are based on calculations and actual observations.

Storage

The light products; namely, natural gasoline, normal butane, iso-butane, and propane, are stored in spherical pressure tanks. The debutanized condensate is stored in atmospheric pressure cone-roofed tanks. The legs on the spheres are extended, placing the bottom of the tanks 9 feet above the top of the foundations or approximately 11 feet above

TABLE 1

COMPARISON OF CALCULATED AND ACTUAL CYLINDER CAPACITIES AT 1500 LBS. SUCTION AND 3750 LBS. DISCHARGE

		CALCULATED QUANTITIES		
	Metered quantity at suction conditions. (Supercompressibility considered in calculating orific coefficient)	Supercompressibility considered 1. To calculate cylinder volumetric efficiency. 2. To make allowance at suction conditions	Supercompressibility considered only at suction conditions	Conventional Method (No supercompressibility considered)
M. cu. ft. per day	39.450	40.760*	36,000	29,435
Percent of metered quantity	100.0	103.5	91.2	74.3

* Calculations made by using the method developed by Robert S. Ridgway, Standard Oil Company of California, presented before the California Natural Gasoline Association in Los Angeles, March 1, 1945.

the ground. This added elevation gives the necessary suction head for satisfactory pump operation. The legs of the spheres are insulated with magnesia blocks and covered with galvanized iron for fire protection. Each sphere is equipped with a ground reading gauge. There is sufficient storage to hold six days' plant production.

The plant products are shipped to the participating companies by either tank trucks or pipe lines. There are four pipe lines serving the plant.

Test Separator Area

All the lines from the production wells enter the plant at one point near the southeast corner. Here the gas from each well flows through its orifice meter, steam jacketed heater, flow bean, check valve and into the production header. The well effluent is metered at full well head pressure. The test separator header is manifolded to all the production lines. After entering the test separator header, the gas and liquid flow through cooling coils and to the 1500-pound test separator where the gas passes overhead through an orifice meter and enters the 1500-pound wet gas stream going to the high pressure absorber. The retrograde liquid or raw condensate is drawn from the base of this separator through a liquid level control valve. This liquid is then flashed in the 450-pound test separator. The flash gas passes overhead through an orifice meter and continues to the 450-pound reabsorber. The liquid is again drawn through a liquid level control valve and flashed in the 60-pound test separator. From this vessel the 60-pound flash gas passes through an orifice meter and continues on with the 60-pound black oil gas to the plant. The 60-pound trap is a horizontal vessel, seven feet in diameter by 30 feet long, with sufficient capacity to hold the raw condensate make from any well for a period of from 12 to 24 hours.

To check a gas-oil ratio the full production gas stream from a well is diverted through the test separator unit. The outlet temperature of the gas from the cooling coils is held constant for all tests. Volumes are recorded and gravities on the three gas streams are taken. The liquid is accumulated and measured in the 60-pound trap. From these figures a gas-oil ratio and percent water cut is determined. Low temperature fractional distillations are run on a liquid and gas sample from each production well. To eliminate running a separate analysis on each of the three gas streams, a composite gas sample is taken. This composite sample is taken in absolute pressure increments proportional to the volume of each stream. By holding the final absolute pressure in the sample bomb below 300 pounds the effect of supercompressibility is small. A sample of 60 pounds liquid is taken and analyzed. The result of the two analyses are combined to determine the composition of the well effluent.

Gas-oil ratio tests are run on all production wells once each month. Fractional analyses were run on the effluent from each production well shortly after the plant started operating. These analyses are now run only when there is a change in a well's gas-oil ratio.

Emergency Shut Down System

The plant is equipped with two emergency shut-down systems, namely, primary and secondary. There are five shut-down stations throughout the plant from which the shut-down systems can be operated. Air pressure of 25 pounds is maintained on these systems. The diaphragm or piston operated shut-down valves actuated by this system are made to operate by reducing the air pressure on the system. The two bleed valves at each of the five shut-down stations are equipped with cams so that the primary system is always made to operate first. Then if necessary, the secondary system can be operated.

The primary system performs the following operations on the processing equipment:

1. Shuts off all incoming gas to the plant except auxiliary fuel.
2. Shuts down the gas compressor engines and all lean oil pumps.
3. Shuts off the fuel gas to the rich oil heater and purges the fire box with steam.
4. Bleeds down the pressure on all 4000-pound, 1500-pound and 450-pound gas lines in the plant, including the 1500-pound absorber and the 450-pound reabsorber.

The secondary system performs the following operations on the utility equipment:

1. Shuts off the fuel supply to the steam boilers and purges the fire boxes with steam.
2. Shuts down the electric generator engines.

The above two systems are used for emergency shut-down only.

Fire Fighting System

Each debutanized condensate storage tank is connected by a 4-inch pipe line to a permanent foam generating plant. The foam generating plant is located on the plant fire line and at a safe distance from the tanks.

Water for fire fighting purposes is supplied throughout the plant in an underground gridiron type system. Throughout the system, block valves are placed so any section of the line can be taken out of service without rendering the rest of the system inoperative. The fire pump is a turbine driven centrifugal type with a capacity of 750 gallons per minute at 150 pounds pressure. This pump is automatic in operation. A one-inch line from the 60-pound utility water system maintains pressure on the fire system. Whenever a fire hydrant is opened and the pressure in the fire system drops below 40 pounds, the fire pump comes on and maintains 150 pounds on the system until it is shut off and is reset by hand.

A gas engine driven turbine pump is installed in one of the two water wells for starting up, fire fighting, and standby purposes. This pump will deliver 500 gallons of water per minute at 150 pounds pressure. The gas supply to this engine is independent of the plant.

Portable fire extinguishers are placed at convenient points throughout the plant.

Comment on L. P. Foote's Paper

By ROBT. S. RIDGWAY, Standard Oil Company of California

THE compressor requirement for the South Coles Levee plant covers seven services, with pressures ranging from 6-inch vacuum to an expected 4000 pounds pressure. These include field gas and plant vapors. Of these seven services, the 400 to 1500-pound and the 1500 to 4000-pound were of sufficiently high pressure to involve appreciable deviation from Boyle's Law. For this particular problem, the analysis of the effect of supercompressibility on compressor capacity and horsepower was developed and later, on March 1, 1945, presented to this body. Applying the results of this study it was found that the power requirement for the low stage could be reduced by 90 horsepower from the 1420 calculated under conventional methods. For the high stage, 560 horsepower could be cut from the 3460 conventionally calculated. This made a total of 650 horsepower by which the installation could be reduced if we were to recognize "deviation" and apply it properly to compressor operation. The total power required for all services when carrying the injection pressure to 4000 pounds, under Boyle's Law calculations amounted to 5850 brake horsepower. We had elected to use 600-horsepower units and by this method of computation we would have needed ten. With 650 horsepower subtracted from this figure, nine units would provide ample horsepower, and for this reason we purchased only nine machines.

At the time the quotations for compressor equipment were requested, we were particularly careful to require the manufacturers to calculate the cylinder sizes from the supercompressibility methods we had developed. Curves were provided to each supplier showing the increase in cylinder capacity which could be expected with variations in cylinder clearance, for the various pressure ranges. The 3½ percent discrepancy shown was probably due to ring and valve losses. The agreement on the 400 to 1500-pound stage was even closer than on the high stage, the metered figures being less than 1 percent different from the capacity computed when recognizing supercompressibility.

As well as saving a 600 hoursepower unit, we further saved ourselves probable trouble due to overloads, by recognizing "deviation" when providing cylinder capacity. Table 1 shows that under conventional methods, the capacity provided would only be expected to handle 74.3 percent of the volume being metered. Had we provided for full capacity under conventional methods, we would have handled 1/.743 or 134.5 percent of the expected volume, and the cylinders handling this gas would have had a corresponding overload. Inasmuch as five of the units are equipped with one low and three high stage cylinders, such an overload would doubtless have demanded that we take immediate steps to reduce it. This would have been expensive, and would have come at a time when such alterations were at least inconvenient.

Foote's tabulation (Table 1) is an excellent illustration of the fact that the supercompressibility correction to compressor performance cannot be broken into parts, and one of them neglected. The whole correction must be made.

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"Oilwell" QUENCHED AND TEMPERED Sucker Rods are brought through their "critical range" temperatures similar to the normalized types—but additional steps are added:—(1) Each rod is liquid quenched at the right moment to secure finest grain structure; then (2) tempered to control hardness, increase toughness, and properly balance properties for best resistance to pumping stresses; then (3) stretch-straightened and proof-tested.

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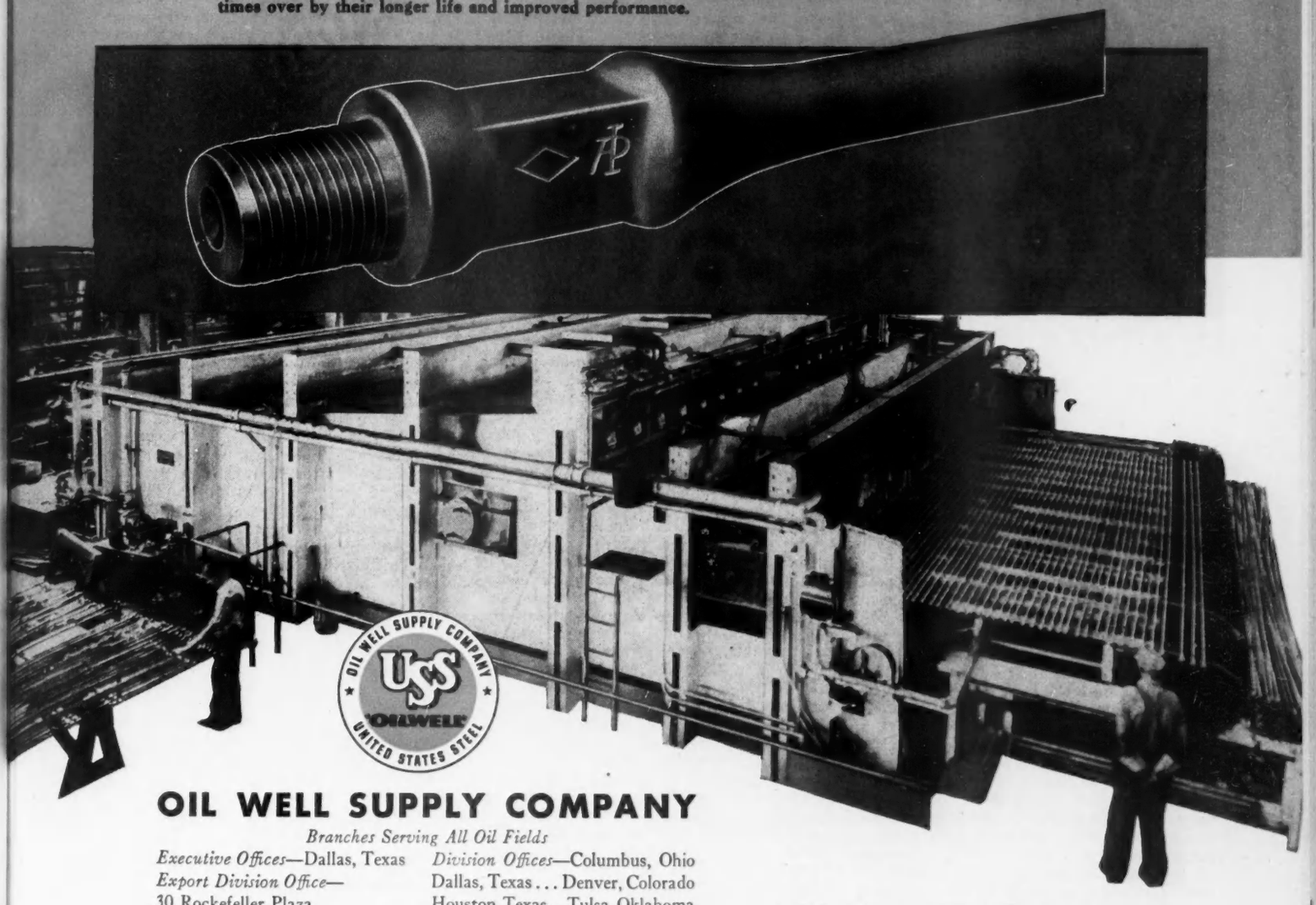

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UNITED STATES STEEL

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Production Packers

THEIR VARIOUS APPLICATIONS

By PAUL V. McGIVERN

THE development of the production packer has suggested various applications and has made possible many achievements not possible prior to its inception. Its use in the isolation of water from the producing sands, pumping and flowing from separate zones simultaneously, pumping two zones alternately from the same well, and, the disposal of salt water, have now been made economically practicable.

The stringent rules for the disposal of salt water in most producing states make it imperative that as little of it as possible be brought to the surface, thus lessening to a great degree the problem of its disposal. Since the cost per barrel of saleable oil must take into account the handling of any unnecessary water, anything that can be done to lessen the amount of water produced, regardless of its disposal costs, works towards lower production costs, and is inevitably reflected in the net cost per barrel of pipe line oil.

In a great many instances the water encroachment comes from holes in the casing above the oil producing zone and may be caused from faulty pipe or corroded holes in the casing from long use, or from extremely corrosive water or gas. In many instances the original trouble is caused by electrolytic action.

Quite often the size of the well precludes the cost of setting another casing string or the oil string may be of such small diameter as will prohibit the running of another string. This leaves the alternate of running a liner or setting a packer.

Setting Packer

The handling of much of this water can be overcome by setting a packer in the casing and isolating the water from the producing zone. The cost will be but a portion of running either a liner or another string of casing. In any event over a period of time the cost will prove to be much less than the lifting and disposal of the encroaching water.

It is advisable to set the packer as near the casing shoe as practicable to eliminate the possibility of future trouble developing below the packer once it has been set. The packer, commonly called a retainer production packer, is permanently set and is not removable except by drilling, though the tubing may be pulled as often as required for changing pumps, cups or any other necessary repairs to the well. If, after years of service, the packer should go bad another may be set immediately above the original without its removal. The packer is constructed of cast iron and resists corrosion to a high degree. The packing element is protected both top and bottom by lead seal rings which prevent any fluid or gas from coming in contact with the rubber and is good for years of service. These rings also prevent the rubber from "flowing" in wells of high temperatures.

There are two ways of running the packer, one of which entails the running and setting on the regular tubing string. After running the packer to the desired setting point a ball is dropped and pressure applied, shearing a pin that will release the upper slips and permitting them to become operative. These slips will prevent any upward movement of the packer. A strain is then taken on the tubing which shears the pins holding the lower slips which, becoming operative, prevent any downward movement of the packer. Sufficient strain is then taken on the tubing to expand the rubber to its full packing-off efficiency. When this has been done the tubing is turned approximately 15 turns to the right, which permits the left-hand square-threaded sub, by which the tubing is attached to the packer, to unscrew from the packer leaving the tubing free to be pulled from the hole. After pulling, the tubing is made up with the working barrel or pump seat in the proper position. Tubing seal nipples are placed in the string in proper position to seat in the packer and the tubing run into the packer. When this has been done the portion of the well below the packer is isolated and packed off from the portion above, preventing any travel of water from above to the producing zone. In wells that have a low fluid level or in which the fluid will not stand as high in the hole as the point at which the packer is set, it is necessary to have a perforated joint or section somewhat below the packer. The perforation may be set at any desired point below the packer so long as any tubing run through the packer is flush joint or of a smaller size than that for which the packer was designed. For instance if the well is tubed with 2½-inch external upset ends tubing, all tubing run through the packer must be 2⅞-inch outside diameter or less. The upset ends of the tubing may be cut off and the ends of the joints either butt welded or insert-jointed to make up the required length. However, this portion of the string may be reduced to 1½-inch regular tubing which might be advisable in areas where "gyp" collects on the tubing or even where corrosion is great enough to present difficulty in pulling back through the packer.

Tubing Repair

If the working barrel or pump seat is placed in the tubing string when first run the tubing need not be pulled to change cups or pumps. For repairs to the tubing itself the tubing may be pulled from and reset in the packer as often as desired. It may sometimes be necessary to rerubber the tubing seal nipples, the element which packs off between the tubing and the packer itself. Two zones may be handled simultaneously in the same well. If the lower zone must be pumped the packer is set between the zones as described above and the upper zone flowed through the annulus. If the lower zone is the higher pressure and will flow, two packers must be set one immediately above each zone. By means of a change-over flow tube the lower zone may be flowed through the upper zone into the annulus and to the surface while the upper zone is being pumped.

In wells where production is being pumped from two zones alternately, the packer is set immediately above the lower zone. By means of the two-zone control valve, raising or lowering of the tubing eight inches will isolate either zone and permit pumping from the other. With the two-zone valve it is also possible to run and set the packer and put the well on production from either zone with one run of the tubing providing the working barrel or pump seat is installed in the tubing before running. Where the monthly allowable of a well can be pumped in half the month, 45 days allowable can be pumped with one shifting of the tubing. For example, 15 days' allowable can be taken from "A" zone the first 15 days of the month, at which time the tubing is shifted to pump from "B" zone. The latter half of the month may be used to take the "B" zone allowable and immediately the first half of the ensuing month may be used to take the allowable from that zone before shifting the tubing the middle of the month to take the allowable from "A" zone and a repetition of the procedure.

Disposal Wells

Salt water disposal wells offer another field for the use of the packer. Being of cast iron it offers high resistance to salt water corrosion. The packer should be set as near the csaing shoe as possible. The disposal string is either run through the packer or set on top of the packer and packed off by means of a packing shoe and the salt water pumped into the formation below the packer, thus keeping the salt water from coming in contact with the casing string. If at any time the disposal zone becomes coated it may be washed or acidized to clean it by running a stringer of small enough diameter to permit the circulation of the water or acid through it across the formation and back around the stringer through the packer into the annulus and

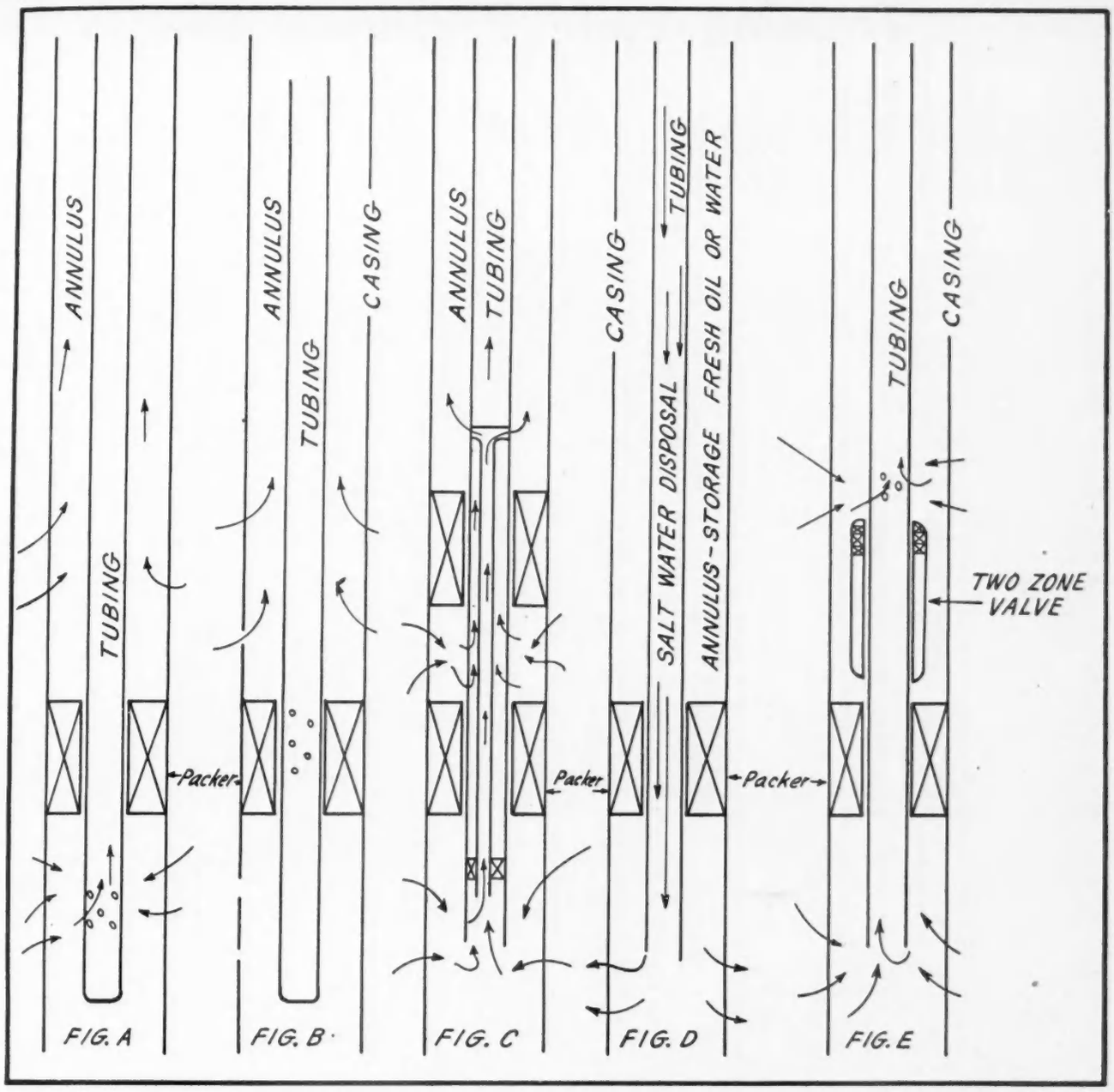


Fig. A. Conventional hook-up, with upper zone flowing to surface through annulus, lower zone flowing to surface through tubing.

Fig. B. Lower zone shut in by spacing perforations within packer, upper zone flowing.

Fig. C. Lower zone being transferred through upper zone by means of change over flow tube and flowing to surface through annulus, while upper zone is being pumped through tubing. Method used when upper zone will no longer flow. By proper spacing of change over tube the lower zone may be shut in and upper zone pumped, or, upper zone may be shut in and lower zone flowed through annulus, or, both zones may be shut in, and the annulus unloaded by pumping.

Fig. D. Hook-up for salt water disposal, annulus being used for storage of fresh oil or fresh water. Same hook-up may be used to pump the zone and segregate water from holes in casing.

Fig. E. Hook-up with two zone control valve. As shown, lower zone is shut off by internal valve, upper zone is being pumped. By lowering tubing eight inches, perforations enter two zone valve, closing off upper zone and opening valve to permit pumping of lower zone. Used in alternate pumping of two zones.

to the surface, after which it may be packed off and the disposal resumed.

The packer may also be used advantageously to lessen corrosion of the casing and tubing by setting the packer in the shoe joint and filling the annulus with live oil. Entrance of water through holes in the casing may also be prevented by filling the annulus with oil and packing the tubing head, providing of course the water pressure is sufficiently high to prevent the oil from draining off into the water zone. In addition to affording an underground storage for the oil, its presence tends to lessen electrolytic action on the pipe.

There are many special applications of the packer and a thorough knowledge of the possibilities of the tool will lead to a solution of many otherwise seemingly unsolvable problems.

Training Field Personnel In

Drilling Mud Control

By JOHN WOODRUFF

State Coordinator, Petroleum Industry Training, The University of Texas

THE first large-scale cooperative training program in testing and treating drilling mud in the field ended its experimental phase at Kermit on June 28 when 73 certificates were awarded drillers and helpers upon the completion of 30 hours of instruction.

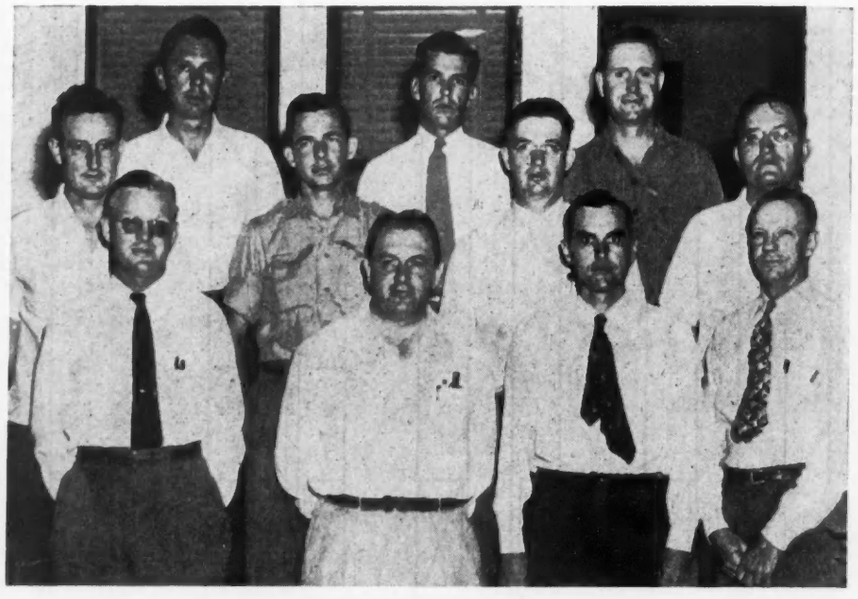
During the spring of 1946 eight study groups were conducted in Kermit, Odessa, and Wichita Falls, with a total enrollment of more than 250 field personnel.

The program was initiated in Odessa by the West Texas section of the American Association of Oilwell Drilling Contractors in cooperation with the Division of Extension of the University of Texas, the West Texas Section of the American Institute of Mining and Metallurgical Engineers, the State Board for Vacational Education and the Ector County Independent School District. Working with the Kermit Independent School District, these organizations extended the work to Kermit. The North Texas Oil and Gas Association and Hardin Junior College of Wichita Falls joined in the program to sponsor two successful groups in that vicinity.

Plans for the development of the work in West Texas were formulated by an advisory committee with Guy Mabee, of Mabee Drilling Company, and J. E. Warren, of Carl B. King Drilling Company, as co-chairmen, B. R. Schabarum, of Carl B. King Drilling Company, as treasurer, and John Woodruff, of the University of Texas, as Secretary. Members of this committee included: Harold Busby, R. B. Saxe, and H. J. Shumate of Gulf Oil Corporation; Sumner Cragin and Hugh Munn of Permian Mud Service; David Johnston and Russell Lilly of Humble Oil & Refining Company; C. L. Kelley of Stanolind Oil and Gas Company; Frank Lovering of Shell Oil Company, Inc.; A. C. Smith of Baroid Sales Division, and C. R. Smith of Cities Service Oil Company.

The advisory committee not only planned the courses but also supervised the preparation of a manual, "Principles of Drilling Mud Control," the second edition of which is now being distributed by the Division of Extension of the University of Texas. This manual was used as guide for all discussions and laboratory work in the study groups.

Additional material on mud problems of North Texas was prepared by a committee at Wichita Falls which was composed of E. B. Clark, Clark Drilling Company, chairman; Fred Sehmann, North Texas Oil and Gas Association, secretary, and S. B. Deal, Shell Oil Company, Inc., Roy Smith, Continental Oil Company, Fred Cox, Cox Drilling Company, Bruce Davidson, Humble Oil & Refning Company, Harry Deaver, Baroid Sales Division, Henry Barrett, Mud Control Laboratory, Harvey Giddings and Bill Lentz, The Texas Company. This material has since been incorporated in the manual.



Advisory committee on drilling mud study at Odessa.

Front row, left to right: Leo Bell, Permian Mud Service; J. E. Warren, Carl B. King Drilling Company, co-chairman; Hugh Munn, Permian Mud Service; R. B. Saxe, Gulf Oil Corporation

Second row, left to right: C. L. Kelley, Stanolind Oil & Gas Company; David Johnston and Russell Lilly, Humble Oil & Refining Company; John Woodruff, University of Texas.

Back row, left to right: Carl Ledford, Baroid Sales Division; Travis Moore, Stanolind; and A. C. Smith, Baroid.

Members not present were Harold Busby and H. J. Shumate, Gulf; C. R. Smith, Cities Service Oil Company; B. R. Schabarum, Carl B. King Drilling Company; Guy Mabee, Mabee Drilling Company, and Frank Lovering, Shell Oil Company.

It was decided by the West Texas committee that local mud engineers should be employed as instructors because of their familiarity with local mud conditioning problems. The first courses were offered at Odessa by Harold Busby of Gulf Oil Corporation and David Johnston of Humble Oil & Refining Company. H. J. Shumate of Gulf Oil Corporation, Lee Daggs of Richardson Bass, Leo Bell of Permian Mud Service, Carl Ledford of Baroid Sales Division and Russell Lilly of Humble Oil & Refining Company, conducted the work at Kermit. In Wichita Falls, Harry Deaver of Baroid Sales Division and D. B. Dickson of Water Treat Chemical Company conducted the work with the assistance of various other individuals connected with the drilling industry.

It was recognized by the advisory committee that at least two main types of courses would be desirable, one for supervisory and technical personnel, and a second for drillers and crew members from the drilling rigs. It was also emphasized that theoretical considerations be reduced to the minimum, with stress on the practical aspects of daily treating of mud in the field.

Following this line of thought, a course of from 15 to 20 hours duration was offered to five groups of superintendents and tool pushers, engineers and other selected personnel in Odessa, Kermit, and Wichita Falls. Enrollment in these groups reached a total of 175 men.

Instructional procedure was by lecture, demonstration and discussion. Topics covered included standard tests, both physical and chemical; control of physical and chemical properties of mud; overcoming contamination from formations drilled; the relationship between drilling practice and mud control; the relationship between drilling fluid and securing geological information; adequate pits and ditches for a deep drilling program; specific casing and mud programs of the different areas in West and North Texas.

The advisory committee in West Texas recognized that a satisfactory mud control program rests, in the final analysis, upon the daily activities of the drilling crews on the rigs. With this in mind a laboratory-type course of 30 hours was initiated in Kermit early in

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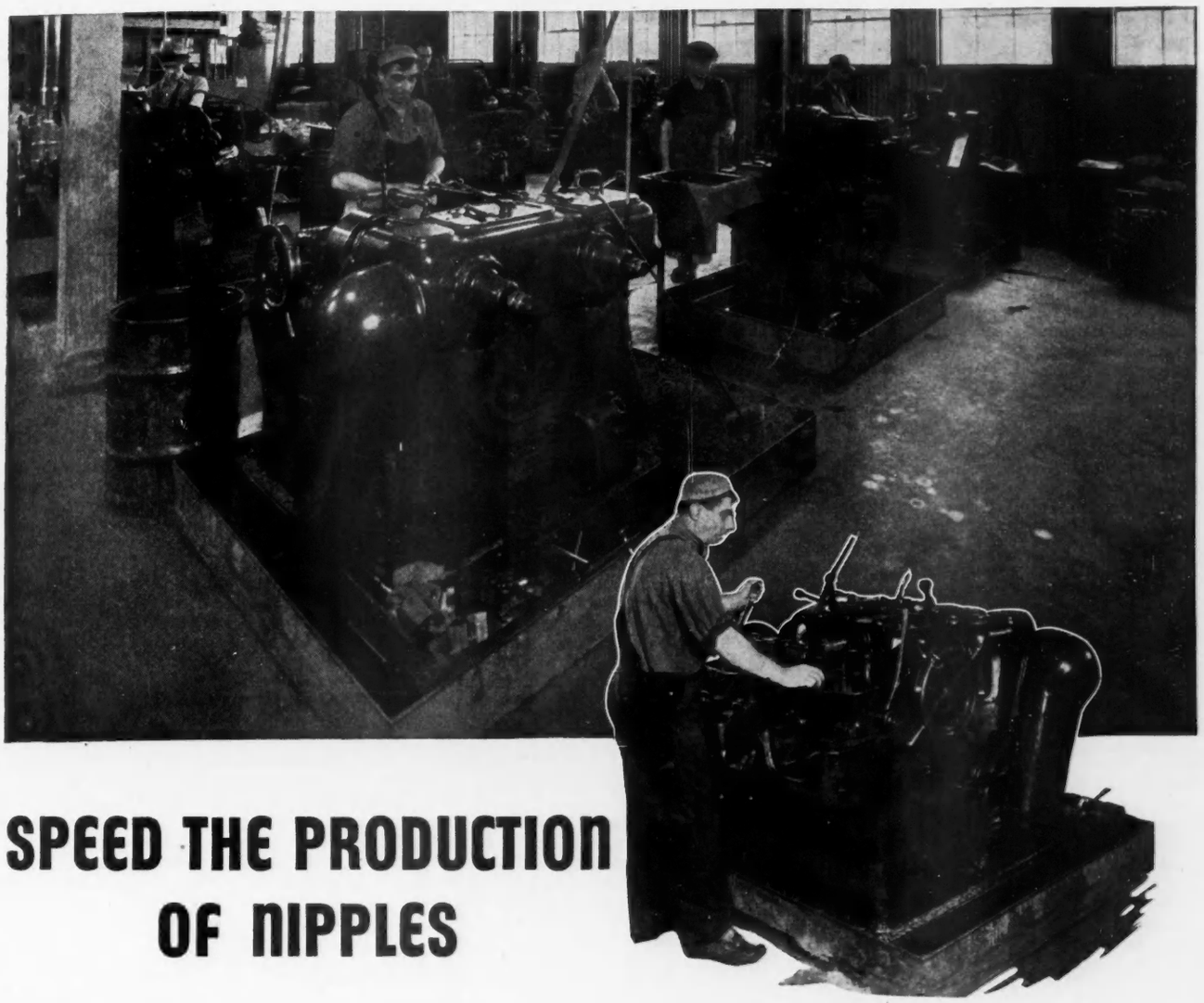

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Joint meeting of morning tour and day men at Kermit mud training course. Instructors were Russell Lilly, Humble Oil & Refining Company (standing at extreme left) and Carl Ledford, Baroid Sales Division (standing, third from left).

June for drillers and helpers of the area.

Enrollees in this course were, for the most part, designated by employing drilling contractors in that vicinity to participate in the work. One section was organized for men on evening tour, and two for men on day work and morning tour. The evening tour men met at 10 a.m. and the others at 8 p.m. All sections met two hours daily, five days per week. Total enrollment for the three groups were 87, of whom 73 received certificates of completion. Attendance was voluntary, and more than half the men enrolled had perfect attendance records.

Sufficient laboratory equipment of all types was assembled to give each man opportunity to learn and practice the standard testing procedures. Equipment included Marsh funnels, mud balances, filter presses, pharmaceutical balances, a Stormer viscosimeter, electric mixers, a Beckman pH meter, supplies of paper strips for pH determination, laboratory glassware, and supplies of chemical indicators and reagents in standard solutions. Adequate supplies of bentonite clays, salt-resistant clays, weighting materials, starch, bicarbonate of soda, salt, and various proprietary products were provided and used. Each man demonstrated his proficiency with major testing equipment and also had his own individual supply of solutions, pipettes, beakers, test tubes, etc.

The first week of instruction covered the preparation of bentonite muds and the use of testing equipment. By the end of this period each man had learned the significance and procedure of determinations of density, viscosity, water loss, filter cake thickness, percentage of salt, presence of sulfates and calcium, and pH. Also included in the first week were methods of computing quantities and preparing bentonite muds from fresh water and from pre-treated contaminated water.

The schedule for the second week emphasized the use of caustic soda and quebracho for control of viscosity and water loss, use of weighting material, and treatment to overcome contamination by cement and anhydrite.

Most of the third week was devoted to the study of salt-water muds and the use of various clays and starches in mud for drilling where severe contamination by salt prevails, as in the Permian Basin area.

Upon completion of the work each man was presented with a field kit of standard solutions, together with pipettes and other glassware for chemical testing on the rig.

In the courses at Odessa and Kermit the enrollment represented the following 37 employers of the area:

Arrow Drilling Company, Ashby Drilling Company, Atlantic Refining Company, Big West Drilling Company, Cities Service Oil Company, W. M. Cameron Company, Continental Oil Company, M. J. Delaney, Duncan Drilling Company, Dillard and Waltermire, Eastland Oil Company, Gardner Bros., Gulf Oil Corporation, Houston Oilfield Material Company, Humble Oil & Refining Company, Carl B. King Drilling Company, Loffland Brothers, Mabee Drilling Company, Magnolia Petroleum Company, McQueen and Clevenger, Moran Drilling Company, Olson Drilling Company, Penrod Drilling Company, Phillips Petroleum Company, Roberts and Hawkins, Richardson and Bass, Rowan Drilling Company, Repollo Oil Company, Shell Oil Company, Sinclair Prairie Oil Company, Stanolind Oil and Gas Company, J. R. Sharp Drilling Company, The Texas Company, Thompson-Carr, Inc., Tide Water Associated Oil Company, Viersen and Cochran, and Wood and Hunt Drilling Company.

Plans are being formulated to continue the mud training work at Kermit and Wichita Falls after the summer vacation period.

The cooperation of the University of Texas and the State Board for Vocational Education in organizing, conducting and financing training programs of this type is available to other oil areas of Texas, and copies of the manual are available from the university. Interested organizations or individuals should contact James R. D. Eddy at the university, or W. R. Cate at the State Board of Vocational Education in Austin.

Evening tour men hold morning meeting in Kermit mud course. Instructor Leo Bell of Permian Mud Service is standing at the right.

Sinaloa Exploration Offer to Private Companies May be "Straw in the Wind"

Mexico is inviting the exploration and exploitation of oil by private firms or individuals on land in the state of Sinaloa. First announcement of a change in Mexico's policy of complete state monoply came July 18 from Gustavo P. Serrano, secretary of the Mexican Secretariat of National Economy, under which is the General Bureau of Mines and Petroleum and the Department of Petroleum Concessions and Contracts.

As the announcement, which appeared in Mexican newspapers, is now interpreted, the Mexican government is willing to grant to private concerns certain types of concessions, independently of Pemex, the state petroleum authority.

This action is the first concrete evidence of a basic alteration in Mexico's oil policy in her attempt to attract private capital for the further development of her petroleum industry. It follows recent and widespread criticism in Mexico against Pemex and the general statement in many industry and government quarters that Mexico's nationalization program has failed in fundamental respects. It points to a bid for a new industrial era in Mexico with increasing private participation in the petroleum development of that country through the device of "mixed companies."

It is known that Miguel Aleman, recently elected as next president of Mexico, favors the retention of state-owned subsoil rights, but believes that private enterprise must be given an opportunity to develop Mexico's natural resources.

However, the possibilities which may be offered to United States or other foreign capital, as differentiated from Mexican private capital, remain highly conjectural.

Bids Asked

The announcement published by the Secretariat of National Economy asked for bids from individuals or companies interested in contracting with the government for exploration and development of specifically described potential oil lands in the state of Sinaloa, embracing 30,000 hectares (74,100 acres) in the municipality of San Ignacio. The published announcement indicated that the bids were sought following an application to the department for opening of the area for development.

While this announcement appears significant, its importance is clouded by the fact that the area involved is strictly wildcat country, being near the Pacific Coast, across the Gulf of California from the lower end of Lower California. Wildcatting there would be costly, and the risks of dry holes would be high. Under these circumstances, it may be questioned if any strong inducement has been offered for private development.

Also, it remains doubtful if the proposed Sinaloa contract goes very far toward inviting the return of United States or other foreign capital to Mexico for oil development. For in addition to the barriers that have prevailed against private capital in any form (domestic as well as foreign), there are double barriers against foreign capital.

Oil Laws' Handicaps

Foreign companies and individuals that might be interested in bidding on propositions such as that in the state of Sinaloa would have to consider not only such proposition itself but also the provisions of the petroleum law of Mexico. Article 60 of that law provides that exploration and exploitation of the nation's oil deposits shall be carried out in one of the following ways: 1) Through the proper agencies of the government; 2) through public oil institutions to be organized for this purpose by law or 3) through contract with individuals and companies. The party to contracts as mentioned can be, according to Article 10, only: 1) Mexican citizens, 2) companies organized exclusively by Mexican citizens, or 3) mixed companies, provided the federal government is in control of the majority of the stock-capital. Under no circumstances can a stock company that issues bearer-shares be party to a contract. In addition, prospective private developers, domestic or foreign, would have to comply with numerous other clearly defined restrictions and regulations.

It would appear that many barriers still stand between U. S. private capital and oil development in Mexico, even though the Sinaloa offering may be a "straw in the wind."

Terms of Contract

The announcement of the Secretariat of National Economy offering to make a contract for the Sinaloa development set forth that any contract made would be based on the following fundamental conditions:

1. The contract will be for exploration and development.
2. The contract will be for a period not to exceed 30 years.
3. The contractor, in consideration of the work he will carry out, will have the right to remove the total production which, without detriment to the field, may be utilized, and up to 87.5% of the oil removed will be for his own benefit, the balance of 12.5% remaining at the disposition of the Federal Government.
4. The contractor will drill at least three wells during the first three years, to a depth of the probable geological formation most favorable for the gathering of oil in this zone.
5. Commencing with the fourth year, and in the event that the contractor does not have in operation three wells commercially profitable, it is required that, in order to comply with this provision, drilling be continued for one additional well each year, for each well that may be lacking. Nevertheless, in the interest of the contractor he may elect at said time to retain one-third only of the surface of the lands covered by the contract on that date, for each commercially profitable well, surrendering the remainder; this to be done without prejudice to the contractor in respect to such guarantees as he may have given for the compliance of the obligations inherent thereto, if by that date he has failed to meet said obligations.
6. Upon obtaining commercially profitable production, the Secretariat of National Economy in exercise of the powers granted under Section 74 of the Petroleum Law and Regulations, and in accordance with the provisions described in Section 44 of said regulations, will incorporate in the Petroleum Reserve half of the zone that may have proved productive; and after giving consideration to the contractor's declarations, will determine the program to be followed in the development of the remainder, in order to guarantee the most suitable development of the field in accordance with the findings of the exploration.
7. In the event that the contractor, in exercise of the privilege granted under Section 47 of the Petroleum Law and Regulations, executes an agreement with a third party to carry out certain of the operations stipulated in the contract, the amount and nature of the compensation for said operations will be completely independent of the production that subsequently would be utilized and therefore, of the value of said production.
8. Within thirty days following the date on which the contractor is advised of a decision in his favor to execute the contract, the compliance of the obligations which he has assumed, will be guaranteed by a deposit in cash in the Banco de Mexico, S. A., or by a mortgage satisfactory to the Secretariat of National Economy, or by a bond of an authorized company; said guarantee to be equal to 10% of the average cost, on said date, of three wells at the depth indicated under condition 4.
9. Applications made under this call must be presented within a period of sixty days counted from the date of the last publication of this call, and must meet the requirements described in Section 26 of the above mentioned ruling.

Britain Uses Dollar Oil Following Loan from U. S.

An increase of 50 percent in the basic petrol ration in Britain was announced July 16 by E. Shinwell, Minister of Fuel and Power, the change becoming effective August 1.

Shinwell, explaining the increase was made possible by the loan extended Great Britain by the United States, said it should make "a substantial contribution to the improvement of inland transport facilities."

"If we used all the oil of the sterling area for United Kingdom purposes, obviously we could make ourselves self-sufficient," he declared. "If the oil comes in and we were assured of supplies, that would be all right, but our largest export was oil; therefore we had to purchase dollar oil on the short haul. That saved tanker space and dollars on tanker freight. Thus use of dollar oil was to our advantage."

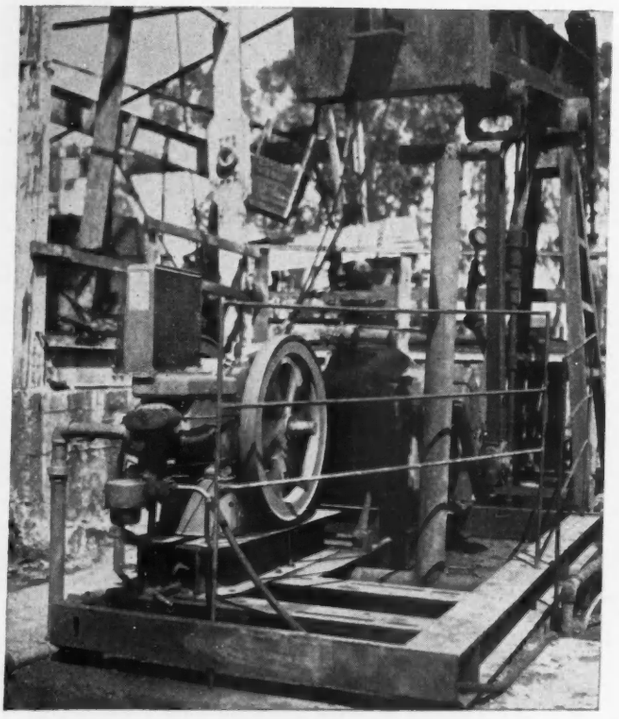
A motion calling for abolition of present petrol rationing has been put down for discussion in the House of Commons.

Czechoslovakia Plans

New drilling apparently is planned in Czechoslovakia with the Czechoslovak government reported inquiring of United States manufacturers concerning the possibility of buying roatary drilling equipment.

THE OIL WEEKLY has learned that the government is interested in purchasing 6 rotary rigs capable of drilling to depths of 2500 meters (about 8200 feet).

Distilled Water Protects Cooling System

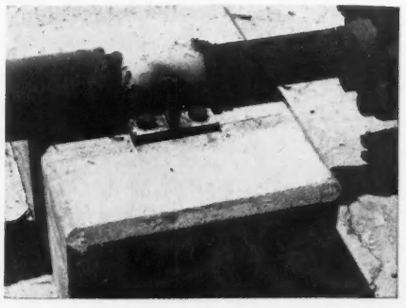


Successful operation of the small single-cylinder engines used in powering many shallow

ENGINE CARE

pumping wells depends in no small measure on the enclosed water condensing and cooling systems mounted atop the cylinder. In areas where hard water prevails, great care must be taken to see that jackets and water connections do not become fouled or clogged by calcareous deposits. One operator eliminates this hazard and considerably reduces maintenance costs by using only distilled water in his engine jackets. Admittedly slightly higher in cost, the distilled water nevertheless assures no foreign deposits and because of its being confined to a closed system, little make-up water is required and cost for water is negligible when compared to possible cleaning-out costs should circulation become impaired.

Lugs Prevent Line Movement

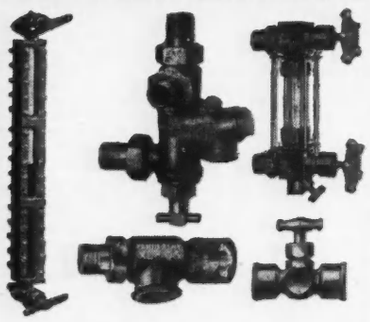


A pipe line idea that eliminates considerable mechanical trouble is contained in the system one company uses in protecting Christmas trees and other surface installations from damage when high pressure surface lines expand or contract due to atmosphere temperature changes.

LINE PROTECTION

It consists of pouring a concrete pier beneath the line ten to 20 feet from the well head and anchoring the line to it with a half-collar placed over the pipe and bolted to a plate in the concrete surface. After this collar is positioned two narrow, semi-circular retainer lugs are welded to the pipe line, one on either side of the collar. Such stops effectively permit the full stress of an expanding or contracting line from being applied on only one or two high pressure fittings which, if they were broken, might cause extremely serious damage to the well.

PENBERTHY
QUALITY
PRODUCTS



Penberthy liquid level gages of various types—injectors—ejectors—all so widely used throughout the oil industry because they have always been dependable under the most severe service conditions.

All are of rugged construction and made by an organization with 57 years experience in the manufacture of quality products.

See Pages 2450 to 2455, Composite Catalog

PENBERTHY INJECTOR CO.
DETROIT, MICH. Canadian Plant WINDSOR, ONTARIO

Mast Solves Twin Well Service Problem

On small properties where space is at a premium, making difficult the servicing of twin wells, the positioning of the derricks so that both may be efficiently serviced may be done in a manner similar to that devised by a California producer with production in a congested area.

WELL SERVICING

The shallower of the two wells was equipped with a simple two-legged mast, the latter held in position beside the regular derrick over the other well by two pairs of pipe legs which brace the crown and center of the smaller unit against the side of the larger derrick. The non-guyed mast is made of drill pipe, lateral cross pieces being shaped to bulge outward permitting clear passage of the tubing blocks when pulled by a portable truck-mounted unit. Through the use of these nearly-horizontal braces, the mast can be stood up in a near-vertical position, permitting normal use of a two-sheave crown block. Ample room remains at the base for locating the pumping unit. Excellent service has been obtained from this comparatively inexpensive installation.

Now Becomes

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of the Security Engineering Co., Inc.
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A completely new, modernly-equipped plant for the precision manufacture of cast and forged steel valves and fittings is now being built in Los Angeles, California.

These new manufacturing and warehousing facilities will provide both KEROTEST and SECURITY customers with faster service and a single dependable source of supply for *every* valve and fitting requirement. Your inquiries are invited.

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Runs to Stills Set New High for Year; Crude Production Declines Slightly

Crude runs to U. S. stills during the week of July 27, rose to a new high mark for the year, while crude production decreased slightly from the previous week.

The production of gasoline and distillate fuel oil was upped considerably over the previous week, but a moderate cut-back was made in residual fuel output. Withdrawals from gasoline stocks continued heavy during the period, while fuel oil stocks maintained their steady seasonal rises. These trends were revealed by the latest weekly report of the API.

U. S. crude production during the week ended July 27 averaged 4,926,000 barrels daily, which is 11,000 barrels under the previous week and 4000 barrels less than the comparable week of last year.

Crude runs to refinery stills increased 70,000 barrels daily over last week to average 4,896,000 barrels per day, a new high for this year. This new high in runs failed by 116,000 barrels, or 2.3 percent, of equalling the runs of the like week of last year.

Refinable crude oil stocks decreased 119,000 barrels during the week of July 20, and on that date totaled 222,740,000 barrels, according to the Bureau of Mines. These stocks exceeded those on hand one year before by 4,632,000 barrels, or 2.1 percent.

Gasoline production, including natural blends, increased 549,000 barrels over the previous week to total 14,535,000 barrels, which is 1,946,000 barrels, or 11.8 percent, less than the comparable week of last year. Stocks of finished and unfinished gasoline were reduced 700,000 barrels during the week and now stand at 88,626,000 barrels, which is 2,445,000 barrels, or 2.8 percent, more than was held a year ago.

Distillate fuel oil output was increased 521,000 barrels to total 5,817,000 barrels for the week, an increase of 1,165,000 barrels, or 25 percent, over the corresponding period of last year. Stocks of this light fuel oil were increased 1,705,000 barrels and now total 44,316,000 barrels, which represents an increase of 8,387,000 barrels, or 23.3 percent, over stocks a year ago.

Residual fuel oil production was cut back 54,000 barrels and amounted to 8,217,000 barrels for the week of July 27, which is 1,471,000 barrels, or 15.2 percent, under last year's week. Additions of 340,000 barrels were made to the stocks of this heavy fuel oil bringing them up to 49,517,000 barrels.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Crude Oil Prod. Week Ended	Runs to Stills Barrels Daily	Runs to Stills Week Ended	Crude Stocks Barrels	Crude Stocks Week Ended	Gasoline Stocks Barrels	Gasoline Stocks Week Ended	Gasoil and Distillate Stocks Barrels	Gasoil and Distillate Stocks Week Ended	Residual Fuel Oil Stocks Barrels	Residual Fuel Oil Stocks Week Ended
Highs:												
1941	4,337	11–22	4,120	10–18	266,187	3–29	99,727	3–29	[1]54,983	11–15	102,448	1– 4
1942	4,337	2– 7	3,961	1– 3	263,208	3–28	[1]109,281	3–14	47,861	11–14	95,857	1– 8
1943	4,436	11–13	4,331	12– 4	245,752	5–29	94,159	3–20	47,187	11–27	72,881	1– 2
1944	4,762	9–30	4,798	12–30	240,992	1– 1	89,162	4– 1	48,162	10–28	64,744	10– 7
1945	4,944	7–21	[1]5,140	8–18	227,554	10–13	99,012	3–24	45,341	11–17	56,074	1– 6
1946	[1]4,961	6–15	4,896	7–27	229,430	3– 2	105,233	2–16	44,316	7–27	49,517	7–27
Lows:												
1939	[3]1,601	8–26	3,125	2–18	[2]229,127	10–12	71,152	10– 7	20,722	4–15	105,397	4– 3
1941	3,364	1–11	3,490	1–18	240,399	11–15	79,923	10– 4	28,382	4–12	90,914	7–13
1942	3,297	7– 4	3,393	5–23	231,896	12–12	75,934	12– 5	29,240	4–25	72,962	12–26
1943	3,821	1– 9	3,579	3–18	232,191	1– 9	68,182	10–16	30,732	4– 3	57,596	12–25
1944	4,357	1– 1	4,228	2–12	220,258	9– 9	76,302	1– 1	30,232	4–19	49,737	3–18
1945	3,621	10– 6	3,409	10– 6	[4]211,813	8–25	70,791	10–13	26,483	3–17	38,548	5–26
1946	4,403	3– 9	4,498	1–12	218,193	1– 5	88,626	7–27	25,131	3– 9	37,289	4– 6

TRENDS OF 1945 AND 1946

Trends in Week Ended	Crude Oil Production Daily	Crude Oil Runs to Stills Daily	Crude Oil Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gasoil and Distillate Production Weekly	Gasoil and Distillate Stocks Week End	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1945:									
January 27	4,727	4,756	221,310	14,957	88,223	4,843	33,561	9,252	51,119
February 24	4,777	4,803	219,351	15,500	95,972	4,958	28,753	9,084	46,713
March 31	4,781	4,677	223,782	14,644	98,758	4,548	26,889	9,184	41,745
April 28	4,805	4,780	223,474	14,633	94,068	4,636	28,273	9,379	39,813
May 26	4,887	4,950	222,831	15,194	89,121	4,667	29,184	9,670	38,548
June 30	4,903	4,999	220,781	15,546	86,472	4,910	32,213	9,077	40,488
July 28	4,930	4,996	218,507	16,106	86,008	4,598	36,071	9,586	42,283
August 25	4,892	4,931	[4]211,813	15,986	84,693	4,960	39,782	9,356	46,201
September 29	4,357	3,812	222,387	11,913	79,552	3,940	43,689	7,047	46,853
October 27	4,273	4,838	224,230	15,530	74,335	5,159	43,472	8,691	45,943
November 24	4,469	4,648	219,363	15,681	83,184	4,802	45,258	8,800	47,474
December 29	4,474	4,729	218,918	14,546	95,205	5,055	36,651	8,765	42,447
1946:									
January 5	4,548	4,651	218,193	14,488	98,494	5,293	35,199	8,867	42,371
January 26	4,626	4,553	220,544	13,622	101,737	5,720	29,498	8,411	39,722
February 23	4,714	4,595	226,699	13,175	104,709	5,728	25,398	7,913	39,290
March 30	4,425	4,684	224,994	13,896	104,715	5,357	28,240	8,738	37,746
April 27	4,672	4,685	224,443	14,228	99,631	5,568	30,466	9,204	39,404
May 25	4,759	4,857	222,214	14,322	95,769	5,463	32,973	8,908	43,368
June 29	4,957	4,854	223,883	14,500	92,333	5,325	37,762	8,828	46,447
July 6	4,905	4,879	222,377	14,351	91,712	5,530	39,526	8,397	47,743
July 13	4,934	4,875	222,859	14,716	90,753	5,416	41,897	8,459	48,330
July 20	4,937	4,826	222,740	13,986	89,326	5,296	42,611	8,271	49,177
July 27, 1946	**4,926**	**4,896**	.....	**14,535**	**88,626**	**5,817**	**44,316**	**8,217**	**49 517**
July 28, 1945	4,930	5,012	[5]218,108	16,481	86,181	4,652	35,929	9,688	42,760
Change:									
In Week	—11	+70	—119	+549	—700	+521	+1,705	—54	+340
In Year	—4	—116	+4,632	—1,946	+2,445	+1,165	+8,387	—1,471	+6,757
In Year	—0.1%	—2.3%	+2.1%	—11.8%	+2.8%	+25.0%	+23.3%	—15.2%	+15.8%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, July 21, 1945.

THE OIL MAN'S CALENDAR

AUG.	
8–9–10	Interstate Oil Compact Commission, Quarterly Meeting, Grand Rapids, Michigan, Pantlind Hotel.
SEPT.	
9–13	American Chemical Society, Including Petroleum Division, Annual Meeting, Chicago.
10–12	Pacific Coast Gas Association, Annual Convention, San Francisco, Fairmont Hotel.
18–20	Oklahoma Liquefied Petroleum Gas Association Annual Convention, Oklahoma, City, Skirvin Hotel.
20	Gas Division, Oklahoma Utilities Association, Annual Fall Meeting, Biltmore Hotel, Oklahoma City.
OCT.	
1– 2	American Association of Oilwell Drilling Contractors, Annual Meeting, San Antonio, Plaza Hotel.
3– 5	AIME, Petroleum Division, Annual Meeting, Galveston, Hotel Galvez.
7– 9	American Society of Mechanical Engineers, National Conference, Mayo Hotel, Tulsa.
11	California Natural Gasoline Association Annual Fall Meeting, Los Angeles.
7–12	American Gas Association, Annual Convention, Atlantic City, N. J.
16–18	Texas Mid-Continent Oil and Gas Association, Houston, Rice Hotel.
24–25	AIME, Petroleum Division, Annual Meeting, Los Angeles, Ambassador Hotel.
24–25	American Association of Petroleum Geologists, Mid-Year Meeting, Biloxi, Mississippi, Buena Vista Hotel.
28–30	Independent Petroleum Association of America, Annual Meeting Fort Worth.
NOV.	
11–14	American Petroleum Institute, Annual Meeting, Chicago, Stevens Hotel.
21–23	Rocky Mountain Oil and Gas Association, Annual Meeting, Denver, Shirley-Savoy Hotel.

☆ Oklahoma

Rogers County Grass Roots Pool Is Given Extension

Grass roots pool gets extension; state's deepest wildcat fails in Bromide, will plug back to test Hunton; Cotton County wildcat quits again; deep Chitwood test gets good shows; Lincoln County wildcat recovers salt water on drill stem; Acre stakes deep Harper County test.

Rogers County: A. T. Campbell has extended the Southwest Inola pool, a grass roots area southwest of Inola, across the Verdigris River into northwestern Wagoner County. Merkel 1 in Lot 3 of NW 25-19n-16e, picked up the Pitkin lime at 448 feet and cuttings at 451 feet showed good oil stains and odor. The pool was opened early this summer by Charles P. Quinlan, Tulsa operator, and has attracted considerable attention. The new well will extend the field nearly a mile.

Grady County: Oklahoma's deepest drilling wildcat, George L. Livermore's Giles Ranch 1, CNW NW 35-8n-5w, on the Middleburg dome, failed to get a show in the deep Wilcox zone and was shut down for orders at 12,253 feet. Drill-stem tested in the lower Bromide-Wilcox, the test recovered salt water. Operator plans to plug back and test the Hunton lime, which showed some saturation. The well is a key Anadarko Basin test. Deese sand was topped at 9440 feet and showed saturation. Hunton lime was had at 10,816 feet with the first Bromide logged at 11,070 feet. While the deep zone is disappointing, observers believe the well will be successfully completed in the Hunton or the upper Pennsylvanian zones.

In Grady County, Magnolia Petroleum Company's Spiers 1, CSW SW 28-5n-6w, in the northeast sector of the deep Chitwood gas-distillate pool, cored from 11,737-744 feet to recover 7 feet, of which the first foot cut was oil sand and the last 6 feet sandy shale, lightly saturated. Drilling continues.

Cotton County: Fast developing into a "little man's country" where several good oil wells have been completed around the 1400-foot level, this county nevertheless chalked up a failure when Johnson-Flesher Drilling Company abandoned McCullough 1, in NW SE NW 17-4s-13w, near Devol. This is the second try to complete a producer at this location. The wildcat drilled to 5005 feet on original contract, then deal was made to carry the hole another 250 feet. Bit was cutting at 5260 feet but electrolog had little encouragement to offer and shutdown order was expected momentarily. The test had 2 slight gas shows up the hole but insufficient to warrant further testing.

Lincoln County: The Carter Oil Company apparently has a failure at James 1, wildcat in NW NW SE of 1-12n-5e, southern part of the county. At 3358 feet, total depth, the well took a drill-stem test with packer set at 3346 feet and with tool opened an hour recovered 450 feet of salt water. The failure has not dampened interest in the county, where a number of blocks are being assembled for Wilcox sand tests.

Harper County: Belief that the Anadarko Basin has bright prospects for good production in the deep sediments of the Pennsylvanian series continues to attract operators despite the expense involved in digging the deep holes. H. M. Acre, Oklahoma wildcatter, has staked Hieronymous 1, CNW SE 3-26n-24w, about 2 miles northwest of an old gas well drilled by Sinclair Prairie Oil Company in Sect. 14. Acre plans a 10,000-foot test and may go deeper. His block totals about 2000 acres, including most of Sects. 2 and 3 as well as 34 and 35-27n-24w. The township has been a focal leasing point and a number of major companies are represented. Acre's test is due to spud in sometime this month and is approximately 18 miles southwest of Continental Oil Company's Howard 1, SW SW SE 15-27n-21w, currently drilling below 5500 feet.

Missouri

West of the Polo gas pool, Todd & Leuhring's Benson 1, 1540 feet east and 220 feet south of the northwest corner of 30-55n-29w, Caldwell County, was drilling at 1183 feet and feeling for the Hunton lime.

Cass County: T. N. Christie's Marftensen 1, SE SE 17-45n-33w, near the town of Peculiar, was dry and abandoned at 715 feet.

Johnson County: Bipp Development Company's Gilchrist 1, NEC SE SW 20-44n-25w, near Leeton, was abandoned at 1279 feet. Fresh water encountered at that depth resulted in the landowner leasing the well to the municipality. The test was located near an old railroad right-of-way hole drilled some years ago and which reportedly had some oil shows.

Oklahoma Allowables Set

The Oklahoma Corporation Commission set the state's crude production allowables for August and September at 387,220 barrels daily, an increase of 3220 barrels over current allowables. Four new fields including North Cruce, North Tribbey, Blue Hill and Greasy Creek, were added to the list of regulated areas, while three fields, including the Fitts field, West Hewitt and Red Rock, were dropped and two of the Cement field zones were combined.

Wells Completed in the United States in Week Ended August 3, 1946

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second or third issue of each month. More detailed data on wildcats published in third or fourth issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama	....	....	....	1	1	....	....	....	....	....	1	....	9	21
Arizona	....	....	....	....	....	....	....	....	....	....	....	....	1	....
Arkansas	1	....	....	....	1	....	....	....	2	2	3	3	106	111
California	21	....	....	1	22	4	....	....	4	4	30	35	1,116	1,292
Colorado	3	....	....	....	3	....	1	....	....	1	4	4	80	18
Florida	....	....	....	....	....	....	....	....	....	....	....	1	15	10
Georgia	....	....	....	....	....	....	....	....	....	....	....	....	2	6
Illinois	22	....	....	10	32	1	....	....	12	12	45	50	1,341	1,070
Indiana	8	....	....	4	12	....	....	....	5	5	17	17	279	201
Iowa	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Kansas	18	3	....	4	25	5	1	....	2	3	33	44	1,201	971
Kentucky	6	....	....	3	9	....	....	....	1	1	10	12	351	298
Louisiana	11	3	....	4	18	....	1	....	3	4	22	34	749	599
North Louisiana	8	3	....	1	12	....	....	....	....	....	12	24	408	214
South Louisiana	3	....	....	3	6	....	1	....	3	4	10	10	341	385
Michigan	5	....	....	2	7	....	....	....	3	3	10	21	447	436
Mississippi	3	....	....	....	3	....	....	....	....	....	3	2	134	224
Missouri	....	....	....	....	....	....	....	....	2	2	2	....	15	32
Montana	2	1	....	2	5	....	....	....	....	....	5	7	149	131
Nebraska	....	....	....	....	....	....	....	....	1	1	1	....	1	3
New Mexico	7	3	....	....	10	....	....	....	1	1	11	10	241	262
New York	15	....	10	....	25	....	....	....	....	....	25	26	672	651
Ohio	7	13	....	7	27	....	....	....	....	....	27	34	735	547
Oklahoma	34	4	3	12	53	4	2	1	13	16	73	73	1,562	1,400
Oregon	....	....	....	....	....	....	....	....	....	....	....	....	2	....
Pennsylvania	27	6	15	2	50	....	....	....	....	....	50	52	1,834	1,764
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	2	2
Texas	83	9	1	29	122	3	3	1	26	30	155	186	4,782	4,307
E. Tex. Bor. Co.'s	....	7	....	....	7	....	....	....	....	....	7	8	99	52
Rest of E. Texas	3	....	....	....	3	....	....	....	1	1	4	6	300	132
North Texas	15	....	1	13	29	1	1	....	7	8	38	45	1,416	1,015
W. Central Tex.	5	....	....	7	12	1	1	....	2	3	16	16	364	278
West Texas	35	....	....	....	35	....	....	....	4	4	39	39	1,000	1,089
Tex. Panhandle	1	1	....	....	2	....	....	....	....	....	2	8	222	353
G. Coast, Upper	7	....	....	3	10	....	1	....	3	4	14	13	384	412
G. Coast, Lower	15	1	....	3	19	....	....	....	2	2	21	28	658	628
Southwest Texas	2	....	....	3	5	1	....	....	6	6	12	15	253	300
S. Central Texas	....	....	....	....	....	....	....	1	1	2	2	8	86	58
Utah	....	....	....	....	....	....	....	....	....	....	....	....	2	....
Washington	....	....	....	....	....	....	....	....	....	....	....	....	1	....
West Virginia	1	4	....	3	8	....	....	....	....	....	8	22	427	472
Wyoming	3	....	....	....	3	....	1	....	....	1	4	3	95	91
Total U.S.	277	46	29	84	436	17	9	2	75	86	539	636	16,351	14,920

* Includes distillate wells. † Includes salt water disposal wells.

☆ Kansas

Pawnee County Test Shows for Heavy Arbuckle Production

Pawnee County wildcat shows for heavy Arbuckle lime production; Phil-Han extends Rickard pool; Butler County pool opener pumps 35 barrels daily; Hugoton gas area spreads out.

Pawnee County: Another good pay-off in an area where Kansas operators have been reaping rich harvests during the past 18 months is in sight at Brack & Huber's Rutherford 1, SW NE NW 8-20s-16w, wildcat 10 miles north of Pawnee. Topping porous and well-saturated Arbuckle lime at 3815 feet and after setting pipe at 3817 and drilling 6 feet into the lime, operators put 185 barrels of pipe line oil into tanks in 8 hours. Testing continues with production expected to increase after acidizing.

Rice County: Flowing at the rate of 10 barrels of oil an hour, Phil-Han Oil Company's Schoonover 1, SE SW SW 21-18s-9w, definitely extended the Rickard pool ¾ mile to the southwest. The extensioner topped the Arbuckle lime at 3242 feet and found it very porous. Operators drilled to 3257 feet, total depth, and acidized. When completed, the well will open approximately 300 acres for further development.

Hugoton Area: Stanolind Oil & Gas Company gave the Hugoton pool 2 extensions in Haskell and Stanton counties. Moving 9 miles northwest, the company established possible production in the Permian gas sands at Peppercorn 1, center of 4-30s-40w, Stanton County. Checking normal with the rest of the field, operator tested good gas showings in formations ranging from the Herington, topped at 2237 feet, to the Ft. Riley, which was had at 2404 feet. In Haskell County, Stanolind's Giles 1, SW SW NE 22-27s-32w, is a possible mile northeast extension with good gas showings reported in the established Hugoton zones. Testing continues at both wells.

Butler County: J. P. Gaty's Schowalter 1, NE NW SW 23-28s-3e, pool opener 2½ miles west of the big Augusta field, was complete for 35 barrels of pipe line oil per day on the pump from the Simpson. Mississippi lime was topped at 2783 feet; Simpson was had at 3001 feet with 2 feet exposed. Although not a large producer, the strike is expected to attract further development in the area between it and the Augusta field, which covers several sections.

☆ West Texas

Ellenburger Gas-Distillate Strike Is Made in Crockett

Gas-distillate strike made from Ellenburger in Northeastern Crockett County; oil flow from Holt lime developed by semi-wildcats in North Monahans area, Winkler County; high Devonian well in Murchison pool, Ector County, tested small amount of water with oil.

Crockett County: Stanolind Oil & Gas Company's University 1-GG, C SW SW Sect. 12, Block 39, and 18 miles southeast of the Barnhart field, nearest Ellenburger area, tested 6 to 8 million cubic feet of gas with a spray of distillate when drill-stem test was run at 7977-8005 feet in Ellenburger, topped at 7975 feet with elevation of 2586 feet. A second drill-stem test at 8002-27 feet yielded gas to surface within 6 minutes for a maximum rate of 280,000 cubic feet daily, with only a trace of distillate in the recovered 5 feet of rotary fluid. Additional core was to be pulled. The company acquired this 2507-acre drilling block at the November 2, 1945, University auction for $265,000, with obligation to drill a deep test. Its acreage protection in the immediate area was enlarged at the June 7 auction by paying $837,500 for 1338 acres in 8 quarter sections or an average of $625.75 per acre. Quarter sections adjoining the 160-acre drilling site to the east and west cost $140,500 and $133,000, respectively, while $177,000 was paid for the SE¼ Sect. 20, Block 39, thus placing a higher valuation on acreage to the southwest of the well. The opening of an important oil area is virtually assured by this remote wildcat.

Winkler County: Stanolind's Sealy-Smith 8, C SW NW Sect. 48, Block A, and 1¼ miles south by east of 6100-foot Clear Fork production in the North Monahans field, was landing pipe to complete after flowing oil at a rate of 20 barrels hourly when tester was used at 5181-5224 feet. The gas volume was rated at 1 million cubic feet daily. This production is from the Holt, topped at 5070 feet, with elevation of 2747 feet, correlating 157 feet low to nearest well. The company controls all nearby acreage.

Ralph Lowe et al's Sealy-Smith 1, C SW SW Sect. 71, Block A, 2⅜ miles west by south of Clear Fork production in the North Monahans field, resumed drilling to fulfill 6500-foot depth contract after indicating probably commercial production from the Holt lime. A drill-stem test at 5221-80 feet yielded gas to surface within 4 minutes, then flowed 36-gravity oil, cut 5 percent with rotary fluid, at a rate of 20 barrels hourly. It is on a 320-acre site farmed out by Stanolind.

Hunt Oil Company's Hill-Gulf 1, wildcat that was plugged back from 8821 feet, swabbed 18 barrels of oil and 68 barrels of water on 48-hour test of Clear Fork perforations at 6100-10 feet. The most effective pay zones have been tested.

Ector County: American Republic Corporation's T. P. Land Trust 1, C SW SE T&P Railway 7, Block 45, T-2-S, and ⅝ mile southeast of the Murchison pool discovery, was drilling at 8430 feet in Devonian, topped at 8377 feet, or 116 feet high. A drill-stem test at 8382-8407 feet yielded gas within 20 minutes, and headed oil. The recovery consisted of 5850 feet of 35-gravity oil and 660 feet of salt water. Source of the water is a puzzle in view of the high structural position. Murchison et al's T. P. Land Trust-Texaco 1 was pumping 27 barrels of 39-gravity oil and 33 barrels of water daily from open hole at 8510-66 feet.

E. E. Fogelson & Cosden's University 1-C-D, 1⅞ miles southeast of the Penwell field Ellenburger producer, was drilling at 8280 feet in the Montoya. The Fusselman was entered at 8105 feet, or 452 feet low, and tested water.

Cities Service Oil Company's Parker-Wentz 1, indicated record-depth Ellenburger discovery, was fishing after starting a drill-stem test of new perforations at 12,482-485 feet. The well flowed oil and water from perforations 5 feet below. Stanolind's Kayser Unit 1 was drilling at 12,860 feet, and will have to drill below 13,000 feet to reach its Ellenburger objective.

Phillips Petroleum Company's T. P. Land Trust 1-J, a mile northeast and southeast of nearest Ellenburger wells on the east side of the TXL structure, eliminated all prospects of Devonian production prevailing on the east flank of the high in recovering water at 8024-74 feet. It was drilling at 8440 feet to try for Ellenburger production.

Wildcats: Olson Drilling Company's Roots 1, C SW SE T & St. L. Ry. 17, Block 118, Pecos County, was running pipe at 2801 feet after testing nominal flow of gas with water at 2711-71 feet. A gas discovery for Pecos County is Bryce McCandless et al's Atlantic-Gulf 1-115, SE NE SE H&GN Ry. 115, Block 11, rated at 4½ million cubic feet daily through tubing at 2250-60 feet. In Crockett County, T. W. and J. M. Loffland Jr.'s Cox 1-A, SE SE T. C. Ry. 40, Block ST, is rated as a 30-barrel pumper after acidizing San Andres perforations at 1020-95 feet.

Andrews County: Fullerton Oil Company's Wilson 342-A, ½ mile east of the discovery Ellenburger producer for the Fullerton field, was plugging back from sulphur water at 10,026 feet to complete from more than 100 feet of effective pay in Ellenburger, topped at 9780 feet, or 113 feet high. First water appeared with oil and gas when test was made at 9898-9933 feet. The Fullerton, Union and nearby Clear Fork and Devonian areas lost a portion of their premium-price status when Magnolia posted an advance of 18 cents. This adjustment is attributed to the quality of the oil being below Mid-Continent district standards, and a substantial volume of oil is above 0.5 percent in sulphur content.

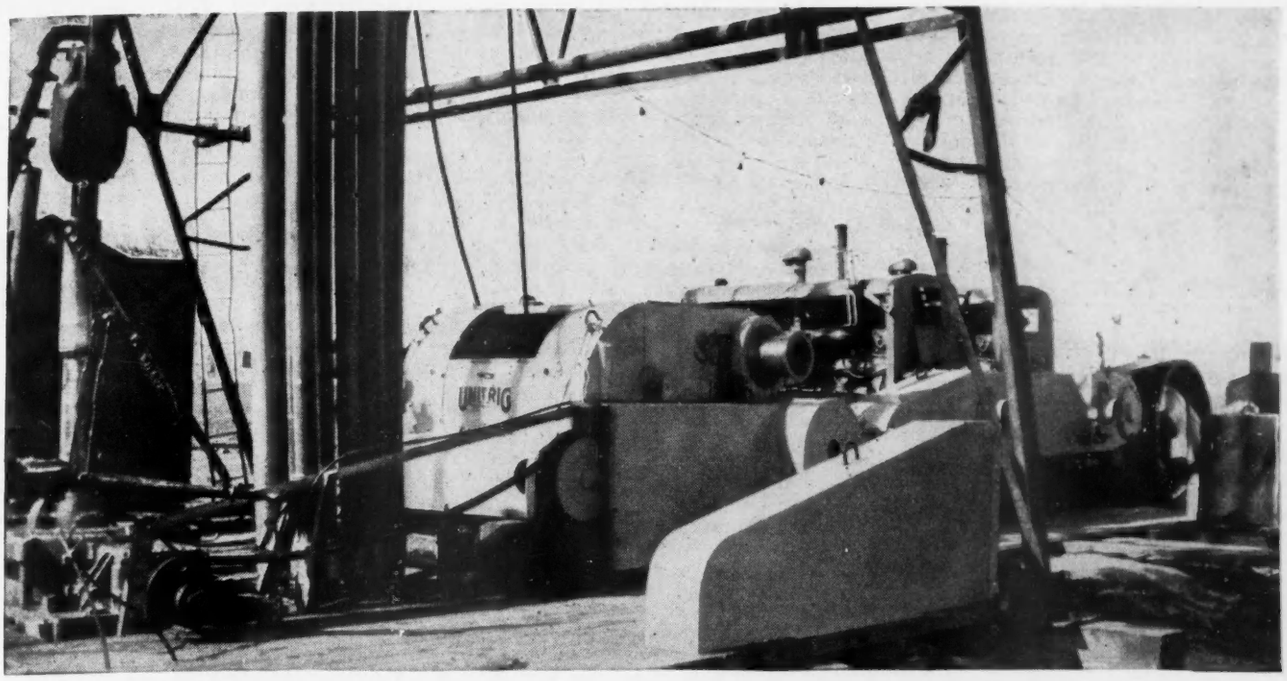
☆ Central West Texas

Wildcat in Fisher County Has Choice of Two Flowing Pays

Fisher County wildcat running pipe to complete with choice of 2 flowing pays; Jones County has Ellenburger failure; Shackelford County wildcat making test of Ellenburger gas show.

Fisher County: Skelly Oil Company's Huddleston 1, T&P Railway 11, Block 19, and 2 miles west of the old Noodle Creek field, Jones County, was running pipe to complete after developing flow of 20 barrels of oil hourly from Palo Pinto lime at 4378-4405 feet. This wildcat passed up oil spray with above normal gas flow from the Canyon at 4305-47 feet, while it also showed probable production in the Noodle Creek lime. Skelly Oil Company obtained its large supporting block from Alder Oil Company et al, who retained checkerboard acreage, including a south offset. Crown Central Petroleum Corporation's Butler 1, William Littlefield Survey and 1¼ miles east of the above wildcat, but in Jones County, failed to indicate production in drilling to 3070 feet, but may continue to the Canyon. Harley Sadler et al are starting Scott 1, C NE NE T&P Railway 17, Block 21, 5 miles northeast of Sweetwater, with a 6500-foot depth contract.

Jones County: Hunter & Hunter's Steele 1, Lot 7, Robert Smith Survey, was abandoned in pre-Cambrian at 5095 feet. The Ellenburger was entered at 4970 feet, with elevation of 1680 feet.



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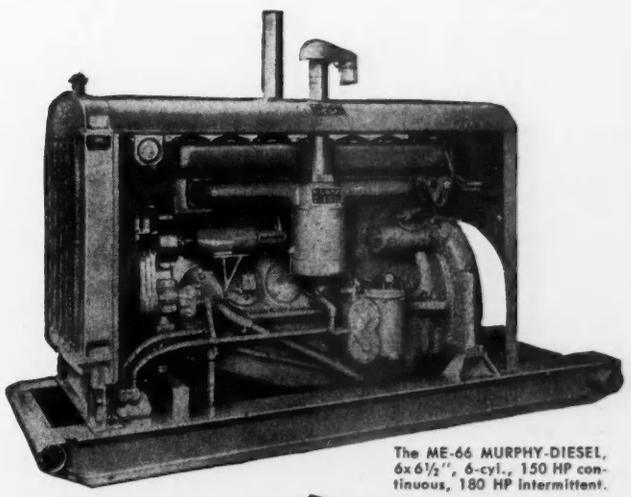

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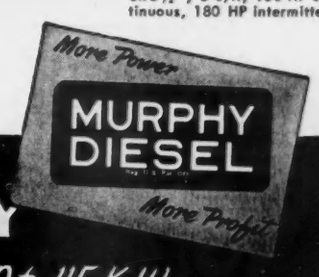

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Andrew Howsley et al's Howle-Texaco 1, NE NE NW T&P Railway 17, Block 16, was drilling at 2540 feet.

Shackelford County: Dave Bennett and J. W. Sorrels' Elliott 1, Sect. 88, S. Webb Survey and southwest of the Ibex field, was installing cable tools to drill plugs from pipe at 4500 feet after logging gas show and nominal oil staining at 4496-4520 feet in Ellenburger, topped at 4476 feet.

☆ North Texas

Southwestern Young County Has Shallow Oil Discovery

Southwestern Young County has shallow oil discovery; second Mississippian producer assured for Killian pool; three Ellenburger prospects in Cooke County are disappointing.

Young County: Nu-Enamel Oil Operating Company's Donnell-Shell 1, northwest corner of TE&L Company Sect. 1205 and 1½ miles northwest of Eliasville, was showing for a 25-barrel pumper from sand at 1759-80 feet. This is the only shallow producer in the general area, and was plugged back from water in the Bend at 3353-3402 feet.

A. R. Dillard et al's Killian 2, northeast corner of TE&L Company Sect. 211 and ¼ mile east of recent Mississippian discovery, was setting pipe for completion at 4910 feet after a favorable drill-stem test of the Mississippian, topped at 4886 feet, or 47 feet high.

Cooke County: Standard Oil Company of Texas' Beasley 2, semi-depleted Ellenburger discovery for the Sivels Bend field, has been plugged back to 6907 feet to recomplete in the Morris (Strawn) sand at 6878-97 feet for a natural flow of 226 barrels daily through ¾-inch choke. The Ellenburger pay at 8905-40 feet developed water trouble after being on production for several months.

Sun Oil Company's Carson Unit 1, I. L. Hodges Survey, A-465, was drilling at 4260 feet in barren Ellenburger, topped at 3750 feet. George W. Graham et al's Berry 1, T. B. Hardwick Survey, A-1599, entered dry Ellenburger at 5650 feet, and was drilling dolomite at 5690 feet. Burk Royalty Company's McGeorge-Texaco 1, W. Moore Survey A-626, entered the Ellenburger at 4297 feet, and was abandoned at 4355 feet. Nominal oil shows were logged at 7 levels in the Strawn series.

Grayson County: Standard Oil Company of Texas' Mitchell 1, Sherman prospect, was drilling at 10,580 feet without shows in the Simpson, topped at 9298 feet.

☆ East Texas

Cherokee County Has Woodbine Strike in Group of Failures

Cherokee County has Woodbine discovery within a group of failures; second failure in Mount Sylvan pool deepening to Glen Rose for geological information; Kemp prospect yields water from Woodbine.

Cherokee County: Walter W. Wise and Delta Drilling Company's Huggins 1, Levi Jordan Survey and within a cluster of 5 outlying failures, was running pipe to complete after indicating a commercial producer without water from the Woodbine. A drill-stem test at 5104-20 feet developed a spray of high-gravity oil, and 990 feet of pipe line oil was recovered from drill pipe. This wildcat is credited with showing green oil with rotary returns while drilling near the 4800-foot level and above the Austin chalk beds. This would be a stray pay.

Smith County: Humble Oil & Refining Company's Dowell 1, east offset to its Mount Sylvan pool discovery in the Paluxy, was drilling at 7560 feet to establish the Paluxy Glen Rose contact for geological information in the event of a deep test being assigned the area. A drill-stem test at 7311-7419 feet in the Paluxy topped at 7330 feet or 58 feet low yielded salt water without shows.

Kaufman County: Humble's Hale 1, Travis Peak prospect for the Kemp area, was drilling at 3510 feet, having tested salt water at 3455-70 feet in Woodbine, topped at 3019 feet with elevation of 409 feet.

Wood County: Manziel and W. F. Bridewell Jr.'s Amazon 1, Hazard Anderson Survey 274, Oak Grove prospect, was drilling at 5015 feet correlating low on the chalk markers.

Humble's McKnight 1, Smackover test for the northeast flank of the Hawkins field, was drilling Georgetown at 6160 feet.

☆ East Texas Border

Harrison County Extension Test Proves Disappointing

Harrison County wildcat, possible Carthage 4-mile extension, proving disappointing; 2 large gas and 1 Travis Peak oiler completed in Carthage field; Huxley outpost gets gas production.

Harrison County: Rogers Lacy's Key 1 wildcat, A. Crockey Survey, may soon be marked a failure. It showed water in Travis Peak, Lower Pettit and Upper Pettit, with slight gas show in the upper zone. Latest casing holes have been shut off for another attempt at slightly higher level. It was drilled to 6625 feet. This operation is about 15 miles south of Marshall and more than 4 miles northwest of wet gas limits in the Carthage field, Panola County, on the north side of the Sabine River.

Panola County: Union Producing Company's Fite 1, Roberts Survey, 5 miles northwest of Carthage, tested 224 million cubic feet of gas daily in the Lower Pettit, rock pressure 2616 pounds, and 5 million cubic feet of gas in the Upper Pettit, with 2591 pounds rock pressure. Same operator's Mangham 1, Carthage field, tested Upper Pettit production for 218 million cubic feet of gas daily, rock pressure 2670 pounds, and Lower Pettit production of 23½ million cubic feet daily, rock pressure 2572 pounds. These are figures of sand face tests at top of production zone instead of top of the hole.

After a rework job on Borders Unit 1, A. G. Hudson Survey, in the Carthage field, 5 miles southwest of Deadwood, W. H. Mitchell reported a flow of 57.75 barrels of 45-gravity oil per day through 24/64-inch choke from Travis Peak perforations. Flowing tubing pressure was 30 pounds. The well was originally completed in 1945 as a gas producer from the Upper and Lower Pettit. Total depth is 6150 feet with 5½-inch casing cemented at 6155 feet.

Shelby County: Humble Oil Company's Pickering Lumber Company 2, W. D. Woodfin Survey, 4800-foot outpost to the Huxley field discovery, obtained a flow of 1 million cubic feet of gas per day from perforations at 6940-54 feet in the Lower Pettit, which was some 300 feet lower than the Pettit zone from which the discovery was completed. Total depth is 7502 feet.

Production Rules Hearings Are Opened in Mississippi

Representatives of major companies doing business in Mississippi as well as representatives of royalty owners and operators appeared before the State Oil and Gas Board in Jackson in the first of three hearings on rules and regulations to be applied to production in several fields.

Douglas Bell, petroleum engineer with Humble Oil & Refining Company, testified that the Gwinville field had an estimated reserve of 765 million cubic feet of gas in addition to 5 million barrels of oil and 10 million barrels of condensate. He said that while the permeability and porosity of the structure is favorable to production, the gas was rather lean and was uneconomic for recycling. He recommended that production should be allocated on the basis of acreage around the well, and suggested that gas wells in the field should not be located closer than 1320 feet and that oil wells should be located in about the center of 40-acre tracts.

In recommending 640-acre spacing units for gas wells and 40-acre units for oil wells, Herman Pressler, Humble attorney, suggested that the Board make provisions for exceptions in the spacing rules in the event it became necessary to drill on a smaller tract.

J. C. Posgate, assistant division petroleum engineer for Humble, said that drilling of gas wells in Gwinville on smaller tracts than 640 acres might tend to cause higher rates of withdrawal which might result in waste.

☆ Southwest Texas

Starr Discovery Completed; Duval County Has Strike

Starr County discovery completed; Hiawatha brings in discovery west of Southland; gas producer shut in after opening gas field near East Peters; Humble prepares to retest Bass wildcat.

Starr County: A discovery was completed for a potential of 102 barrels of 41.5-gravity oil daily. It is W. D. Kennard's M. M. Garcia 1, Porcion 90, 4200 feet northwest of the north end of the Boyle field and 5600 feet south of the Rincon southwest extension. Production was from perforations at 3500-04 feet through ⅛-inch choke with tubing pressure 460 pounds and casing pressure 1280 pounds. Gas-oil ratio was 300/1. Well was drilled to 3541 feet and 5½-inch casing set to 3541 feet. The pay was topped at 3494 feet.

Duval County: Hiawatha Oil & Gas Company's Southland Life 41, discovery west of Southland field production, was brought in for an estimated 50 barrels of 38-gravity oil daily on ⅛-inch choke from perforations at 3883-87 feet in the Cole sand, a level somewhat higher than that of previous production in the Southland field, and separated from the field by several dry holes. Gas-oil ratio was

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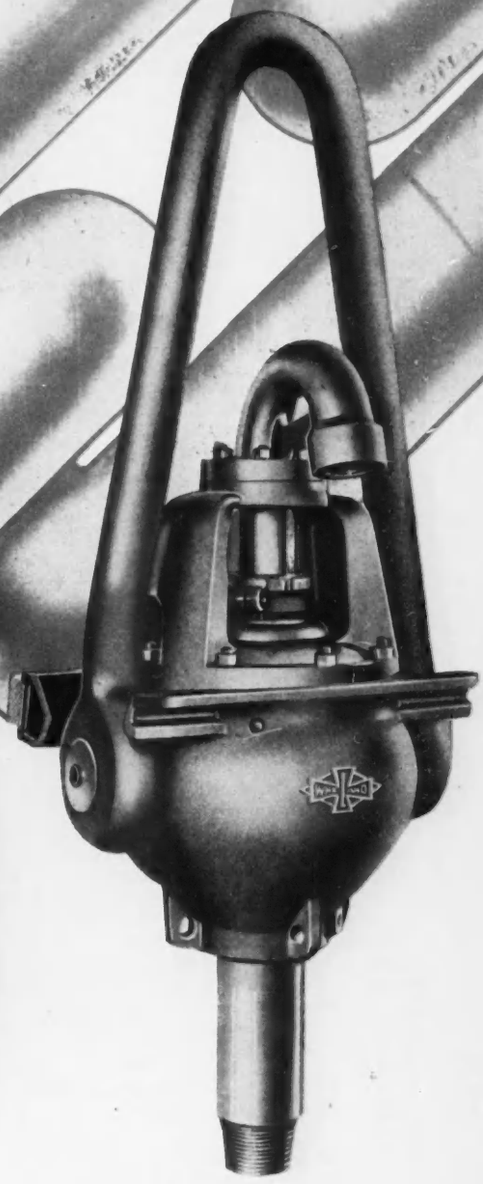

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6900/1 with tubing pressure 1140 pounds. Total depth is 5510 feet with 5½-inch casing set at 5425 feet.

Cox & Hamon completed Leila Peters 1, wildcat 1 mile southeast of the East Peters field, in the BS&F Survey 194, for a gas discovery. Production is from perforations at 2612-18 feet with total depth 2700 feet. Gas sand was logged at 2612-40 feet and 5½-inch casing set to 2690 feet. Bottom-hole pressure was 750 pounds. The well now stands shut in with no production gauge reported.

Jim Hogg County: Humble Oil & Refining Company is making preparations to retest Mrs. A. M. Kelsey Bass 23, wildcat in the San Rafael Grant, 3000 feet northwest of the Bass 17 well at Kelsey field, after the well flowed mud and a slight show of gas from perforations at 7394-7413 feet. Tubing was pulled and an additional 114 perforations were made in this same zone for the retest. Total depth is 8253 feet with 5½-inch casing set to 7487 feet.

☆ South Central Texas

Humble Completes Southwest Extension in Jourdanton Area

Humble completes southwest extension in Jourdanton area; Charlotte wildcat completed and put on the pump; preparations made to test wildcat north of Rockdale; Edwards lime topped at shallow depth in Uvalde test; side wall samples taken in LaPryor wildcat.

Atascosa County: Humble Oil & Refining Company's Sandeen 1, 8200 feet southwest of the Alamo Lumber Company 1, Jourdanton field, has been completed for 30.66 barrels of 39-gravity oil, no water, daily from open hole at 7384-87 feet through ⅛-inch choke. Gas-oil ratio was estimated at 736/1 with tubing pressure 160 pounds. Production is from the Edwards lime.

The Texas Company is making preparations to put R. B. Love 1, wildcat 1 mile southwest of Charlotte field in the J. Poitevent Survey 3, A-690, on the pump after reperforating the well at 5187-97 feet. Initial perforations were made at 5252-60 feet where the well was swabbed with unsatisfactory results, and was perforated at 5208-22 feet after tubing was pulled. The well flowed 3 barrels per hour. It was again reperforated at 5187-97 feet, where it was swabbed and tested, with no reports of the test given.

Medina County: W. F. Glen's A. R. O'Neal 1, wildcat on a 270-acre lease 7 miles northeast of Rockdale, Jose Leal Survey, was reported making preparations for production tests after drilling to 4121 feet. A slight show of oil was made in the Edwards lime at 4090-4121 feet, and 5½-inch casing was set to 4084 feet, apparently to complete in the open hole.

Uvalde County: Casing has been set in J. A. Green's Kennedy-Nunley 1, wildcat 7 miles south of Sabinal, and operators are drilling below 1580 feet in the proposed 3500-foot test. Edwards lime was topped at 1266 feet.

Zavala County: Humble Oil & Refining Company was taking side wall samples in I. T. Pryor 2, wildcat 3½ miles southeast of LaPryor on a 30,000-acre lease. Last total depth reported was 8686 feet, to where electric log was run.

☆ Lower Texas Coast

North Minnie Bock Outpost May Open Producing Zone

North Minnie Bock outpost likely to open producing zone; Burnell-Wilcox outpost drills below surface pipe; Goliad wildcat perforates for production test; Sun's Olmos Creek wildcat flows gas, prepares for second test.

Nueces County: The Atlantic Refining Company is building tanks preparatory to testing a possible new field opener, George Renken 1, outpost 2113 feet northeast of the Ewing 2 discovery at North Minnie Bock. The well has been testing oil from perforations at 7877-81 feet, which may be a new oil producing zone for the area. Oil was previously tested in perforations at 6025-35 feet, but the well failed to flow. Bottom of hole is at 9413 feet with 5½-inch casing set to 9115 feet.

Bee County: Stewarts and George Brown have drilled out from the surface casing in their soutwhest outpost at Burnell - Wilcox. It is the operator's Winona Hall Brinkoeter 1, about 4000 feet southwest of production at the Burnell-Wilcox field, and in the George Pagen Survey A-249.

Goliad County: Sun Oil Company was making final preparations to test M. L. Patton 1, wildcat about 6 miles west of Goliad in the Maria Jesusa de Leon Grant A-22 and 700 feet west of Cabeza Creek. Operator drilled to a total depth of 10,765 feet, where 5½-inch casing was cemented.

Brooks County: Fishing operations are in progress at Sun Oil Company's D. J. Sullivan 6, wildcat 4½ miles southeast of Falfurrias in the Loma Blanca Grant and 660 feet north of Lomos Creek. After drilling to 13,206 feet, 5-inch casing was set to 12,180 feet and perforated at 11,987-12,018 feet. No recovery was made on a drill-stem test in this zone and the well was reperforated at 10,478-479 feet and tested on 3/16-inch choke. Tubing developed 1500 pounds pressure and the well flowed considerable gas, which flow was attributed to an unsatisfactory cement job. Operators prepared to perforate again at 10,439-441 feet, but the perforator gun became stuck while running it in the hole, thus causing the present fishing job.

☆ Upper Texas Coast

Nash Dome Test Recovers Oil From Good Sand Section

Nash Dome north flank test recovers oil in good sand section; Liverpool outpost prepares to perforate for production test; Hull flank well continues to test; North Delhi wildcat tests in shallow sands; production test indicates good oil field southeast of Blessing townsite; wildcat gas discovery fishing collapsed casing.

Fort Bend County: Preparations are being made to run a production test on Danciger Oil & Refining Company's Meier 3, north flank well on the Nash Dome. The section from 5885-5990 feet was cored and drill-stem tested. During a 22-minute test, the working pressure built up to 1925 pounds and 43 barrels of 29-gravity oil was recovered. It is reported that about 82 feet of this section is good oil sand with a 90-foot shale section below. The test will not be extended to the lower sands.

Brazoria County: Pan American Production Company's Callihan Unit 1, outpost test ¾ mile west of the southwest extension at Chocolate Bayou and about 1½ miles southeast of Liverpool in the Angier-Hall-Bradley Survey A-6, was drilling out cement after squeezing to shut off water below favorable sands near the 11,570-foot level preparatory to perforating for production tests. Total depth is 12,204 feet with 7-inch casing set to 11,615 feet. The well was plugged back to 11,611 feet.

Liberty County: General Crude Oil Company continued to test Phoenix Development Company 1, southeast flank test on the old Hull Dome in the Jesse Devore League, after the well had flowed oil before the choke became stopped up. Present production is from 47 perforations at 7850-58 feet where the well originally tested oil. The choke was cleaned and reset, the well washed again, and according to last reports, was showing 600 pounds gas pressure on the tubing, spraying some oil by heads. Total depth is 9006 feet with 7-inch casing set to 8145 feet.

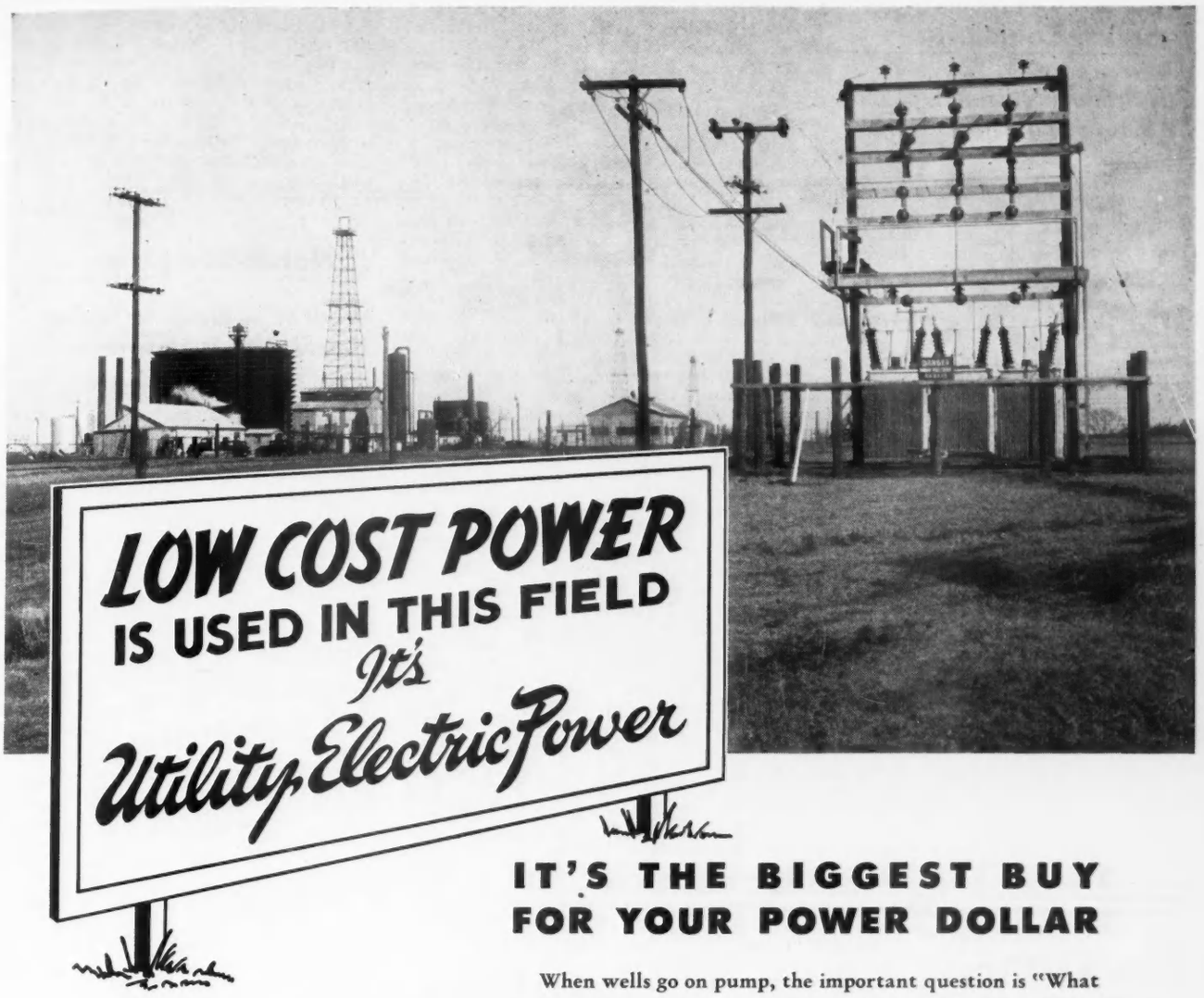
Harris County: Humble Oil & Refining Company was testing Nora C. Kramer 1, wildcat in the C. P. Collins Survey, Block 2, Sect. 36, about 2½ miles south of the North Delhi gas discovery well. This test was made just below the surface casing set at 2544 feet. Sixty feet of mud, 120 feet of salt water and sand were recovered from 2895-2904 feet as a result of the first test. Another test is being made at 2920-42 feet. The well is scheduled for 7500 feet.

Matagorda County: Another good oil field has been indicated by Amerada Petroleum Corporation's Ike Laughlin 1, wildcat 3 miles southeast of Blessing townsite. The well flowed at the rate of 146 barrels of 45.2-gravity oil daily on a drill-stem test made from perforations at 8834-47 feet using ¼ and ⅛-inch chokes. Tubing and casing pressures were not reported. Total depth of the well is 11,513 feet with 7-inch pipe set to 10,105 feet.

A new gas-condensate field is likely for the area 2 miles northeast of Blessing townsite. Ralph A. Johnston's Live Oak Farms 1, wildcat test on the Mrs. Grace P. Heffelfinger property in the Josiah Tilley League, was reported fishing collapsed surface pipe after the well kicked and started blowing gas and condensate while operators attempted to make a recovery on a drill-stem test from the open hole at 8775-81 feet, the total depth.

Tax Income Up

Tax income to Louisiana for the fiscal year 1945-46 totaled $98,915,457.67, according to a report released by Revenue Collector Roland Cocreham. This is an increase of $11,979,470.83 or 13.77 percent over the previous fiscal year's total. The fiscal year's greatest increase was shown by the gasoline taxes which jumped $4,179,327.35 over last year to a total of $22,133,699.58. The tax on lubricating oil totaled $1,194,176.20, the gas gathering tax brought in $2,175,248.63, and the severance tax on crude was $16,367,007.08.



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☆ South Louisiana

Gas Producing Zone Opened By Sun in Shuteston Field

Sun opens gas sand at Shuteston field; Bayou de Fleur wildcat continues to drill after setting pipe in favorable sands; Big Island wildcat completed for good oil well after extensive tests; Bilbo discovery well in Beauregard Parish reworked.

St. Landry Parish: A new gas producing zone has been discovered by Sun Oil Company in Darby 1, south extension test in the Shuteston field, 6-8s-4e. Spudded in late January, the well was drilled to 10,854 feet, then plugged back to 7890 feet and sidetracked. Drill pipe was stuck at 9692 feet and the well plugged back again and sidetracked at 7923 feet. The old hole was encountered at 9747 feet and reamed and washed to 10,100 feet. At a total depth of 10,130 feet, 7-inch casing was set and perforated with 88 shots at 9965-85 feet where the well flowed dry gas through a 7/64-inch choke. Tubing pressure was 3650 pounds. The well is now shut in.

Plaquemines Parish: The California Company's E. P. Brady 4, Unit 4, wildcat in the Bayou de Fleur or Alliance area, approximately 3 miles southeast of the field discovery in 19-16s-24e, was reported to have encountered good sands through which casing was set, and is considered to be a likely new field opener. Operators are drilling below 12,675 feet after running an electric log at 12,225 feet. Seven-inch casing was set to 11,185 feet. No shows were indicated on logs run to 9024 feet.

Rapides Parish: Efforts on the part of Union Producing Company et al to make a successful producer of Belgard 1, wildcat in the Big Island area, center of NE¼ SW¼ 14-4n-3e, were rewarded early this week with the well being completed for an initial potential of 270 barrels of 46.3-gravity oil at the end of an 18-hour test on a 3/16-inch choke. Tubing pressure ranged from 1700 to 1800 pounds while the casing pressure gauged 1400 to 1500 pounds. The Tuscaloosa was topped at 9260 feet and 7-inch casing was set to 10,008 feet. Several open-hole tests and drill-stem tests were made before the well was extended to 12,010 feet. A 5-inch liner was hung to bottom and another series of drill-stem tests were conducted with negative results. Final perforations were made at 9648-9700 feet where the well flowed at the rate of 30 barrels per hour of 39-gravity oil, no water. Tubing was run and well tested on 3/16-inch choke. Gas-oil ratio was calculated to be 1500/1.

Beauregard Parish: Magnolia Petroleum Company's Powell Lumber Company 1, Bilbo discovery well rework job in 17-6s-11w, was squeezed and reperforated at 8417-21 feet where an initial potential gauged 51 barrels of oil plus 50 percent water daily through 7/64-inch choke. Gas-oil ratio was 2180/1, according to latest reports, which show the well still testing. This well was originaly completed at 8412-18 feet for a potential of 84.81 barrels daily and began making some salt water when the squeeze jobs were started.

Terrebonne Parish: The Texas Company's State 12-5, deep test on lease 200 of the Dog Lake Unit, 1-22s-15e, has been completed in a new deep sand of the Dog Lake field for a potential gauge of 200 barrels of 37.3-gravity oil daily through ⅛-inch choke from perforations at 9600-13 feet. Tubing pressure was 1625 pounds, with gas-oil ratio calculated at 1138/1. Total depth is 10,131 feet.

☆ North Louisiana

Wildcat in Richland Parish Has Flow of High-Gravity Oil

Richland Parish wildcat has flow of high-gravity oil; northwest extension to Lake St. John field completed as good oiler; deep tests in Bossier and Jackson parishes drilling without showings; Sabine wildcat abandoned.

Richland Parish: Kingwood Oil Company's Dr. T. M. Sayre, C SE SE SW 34-17n-7e, wildcat 4 miles south and east of Rayville and 2 miles north and west of production in the Big Creek field, flowed 6 barrels of high-gravity oil per hour on ¼-inch choke. The well was perforated from 2601-03 feet, and is at total depth of 3430 feet.

Tensas Parish: Midstates Oil Corporation et al's Wentworth Washington et al 1, 26-9n-10e, which extends the northeast limits of Lake St. John production, and proves up several hundred acres, was completed for 169 barrels of 39.4-gravity oil with no water during the first 19 hours of testing. Well was drilled to a total depth of 9156 feet. The allowable will be 261 barrels per day.

Chicago Mill & Lumber Company is preparing to test the Tuscaloosa section in Mutual A-2, 30-12n-10e, 6 miles north of Holly Ridge field production. Oil shows are reported to have been logged from 8223-50 feet, before the well entered water at 8250 feet.

Bossier Parish: Barnsdall Oil Company's wildcat Carter-Burton, 23-16-13w, Plain Dealing area, was drilling at 12,265 feet in what is declared the deepest test on record in North Louisiana, without indication that it has yet reached the Smackover.

Sabine Parish: Arrow Drilling Company's shallow wildcat Bauer 1, 31-8-13w, was abandoned at 3598 feet.

Red River Parish: Carter Oil Company's Long Bell Lumber Company 1, wildcat in 24-13-10, plugged back and perforated around 2700-50 feet.

Jackson Parish: Shell Oil Company's deep test, Tremont Lumber Company 3, 21-15-1w, is drilling below 10,639 feet.

☆ Arkansas

New Lafayette County Field Rated Significant Discovery

Rodessa discovery in Lafayette County considered important; 2 wildcat failures in Bardley and Union counties; Wesson failures recompleted for commercial production.

Lafayette County: First new field to be discovered in Arkansas this year, and one of the state's most significant discoveries in recent years, is Austin E. Stewart and H. G. Lewis, Jr.'s Hyrum Moore Estate 1, C NW SE 14-16s-26w, about 4 miles east of Garland. The well,

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located along a fault line play with an east-west axis, has directed attention of other operators to concentrate on similar plays in Arkansas. Latest report on tests showed the well flowing 250 barrels of 40-gravity oil per day through a 3/32-inch choke on tubing, with flowing tubing pressure of 480 pounds and casing pressure 520 pounds. Production is from the Kilpatrick horizon in the Rodessa section, through perforations at 4142-52 and 4108-18 feet. Additional showings were recorded in the Tokio sand at 2930-98 feet and in the Paluxy sand at 3005-35, 3050-70, and 3340-50 feet. The test is supported by The Carter Oil Company, Magnolia Petroleum Company, and Amerada Petroleum Corporation, all of whom are well protected with leases in the area. Interstate Pipe Line Company will connect to the well and purchase the oil.

Nevada County: Barnsdall Oil Company is building roads for a 5500-foot Smackover lime wildcat, Stuart 1, C SW SE 12-14s-23w. The test is 1 mile northwest of Hunt Oil Company's Bodcaw 1, abandoned in the Eagle Mills at 7180.

Union County: Guy Mabee's Union Sawmill 1, wildcat, NE SW NW 31-19-11, 4 miles southeast of New London, showed salt water in the Smackover lime from cores at 6395-6415 feet, and was chalked off as a duster.

Bradley County: American Liberty Company's Bradley Lumber Company 1, wildcat, NE SW 15-13-9, was abandoned at 5010 feet.

Ouachita County: McAlester Fuel Oil Company's R. W. Wesson A-2, SE NW SE 24-15-19, Wesson field test which was abandoned in January as a dry hole, was completed from perforations at 2800 feet, flowing a good stream of oil. Further tests are being made in a study of the new zone formation uncovered.

T. E. Lee et al's W. H. Hogg 1, NE NE NW 25-15-19, a Wesson southwest outpost, is having machinery moved in to drill.

Lion Chemical Company's H. L. Curry 1, wildcat, 4 miles north of Stephens, NE SE SE 33-14-19, was testing the Blossom sand at 2125 feet.

Plant Contract Let

Hunter & Hunter, Abilene, Texas, operators have contracted for the erection of a pressure maintenance plant in the Williams field, Coleman County, Texas, with an initial capacity of 2 million cubic feet of gas daily. This field has 21 wells producing from the 3700-foot Strawn sand.

☆ Mississippi

Saturated Sand Developed By Lincoln County Prospect

Lincoln County prospect develops saturated sand section; shows unofficially reported at Forrest County deep test; Baxterville field test completed for 440 barrels; Jefferson County prospect has successful drill-stem test.

Lincoln County: The California Company's F. W. Parnell 1, NEc SE 17-6n-8e, 2¼ miles southwest of the Mallaieu field, has enhanced prospects in the area with recovery of 17 feet of saturated sand in cores from the lower Tuscaloosa horizon. Saturation was developed at 10,417-434 feet in stringers just above the Massive sand zone. Driller is still coring after cores from 10,444-464 in the Massive sand recovered shale.

Roeser & Pendleton's Columbus Lumber Company 1, NE NW 20-6n-6e, is drilling below 9500 feet with no shows. The California Company's John Howard 1, NEc 8-7n-7e, Brookhaven field, was preparing to run production test after setting casing to 10,306 feet. California's W. L. Case 1 and Bert Smith 1, in the same area as the Howard have reached the productive zone and are running core tests.

Forrest County: The Superior Oil Company's Cassie Bradford 1, SEc SW NE 1-3n-13w, deep test, is unofficially reported to have had several shows of oil in various sections. If the well is successful, is will be the first for the county, which is in the south central section of the state. Driller is currently working below 12,060 feet.

Wayne County: Humble Oil & Refining Company's E. L. West 1, NE SE 18-9n-7w, several miles from the Eucutta field, has reported shows of oil from 4953 feet in the Eutaw horizon. Commercial potentialities of the shows have not been announced.

Lamar County: Gulf Refining Company's I. H. Bass 2, SEc NW SW 8-1n-16w, Baxterville field, has been successfully completed with an initial production of 440 barrels of oil per day through ¼-inch tubing choke. Production is from 3 sections of the lower Tuscaloosa and Massive sand zones below 8787 feet. Gulf's W. J. Howard 2, 17-1n-6w, Baxterville, has also been completed from the Tuscaloosa with an initial production of 377 barrels of oil per day. Gravity of the oil was 16.6 with gas-oil ratio 65/1.

Jefferson County: Humble's Mrs. A. M. Stewart B-2, 27-9n-1w, Fayette field, is cleaning out hole after a successful drill-stem test yielded 450 feet of oil in a 20-minute test. Casing was perforated at 9597-9641 feet in the lower Tuscaloosa to establish production. Humble's J. K. Strass 1, B Unit, 14-9n-1e, is working below 4233 feet in the Wilcox zone after a drill-stem test at 3596-3613 feet flowed gas in a 20-minute test.

Jeff Davis County: Gulf's C. L. Slater 1, SWc NW SE 22-9n-19w, Gwinville field, has recovered sand with slight gas odor from cores at 8153-63 feet. Cores recovered at 8106-25 feet showed porous sand with fair shows of gas-condensate.

Jasper County: Gulf's McDonald-James 1, 35-1n-12e, West Heidelberg field, was preparing to complete after swabbing good amounts of oil from the Eutaw zone at 5072-80 feet.

Alabama

The Carter Oil Company's E. A. Rentz 1, NE NW NE 4-10n-3w, in the eastern section of the Gilbertown field, Choctaw County, was finally abandoned at 4979 feet. The well was driven to 4159 feet, where trouble was encountered with the drill stem, and then hole was sidetracked and extended to final depth in the Comanchean zone. Extensive testing failed to recover shows of commercial value.

Clarke County: The California Company's White City Plantation 2, NE SE 12-7n-1w, wildcat in the western section of the state, is drilling below 3489 feet after topping chalk at 1265 feet. No shows have been reported.

Pickens County: C. H. Murphy, Jr.'s R. E. Eaton 1, NE SE 34-19s-16w, wildcat, reported slight gas odor in cores at 2821-35 feet. Slight odor has also been reported from other sections further up the hole. Well is drilling presently in black sandy shale below 2857 feet.

Florida

Gulf Refining Company's State 1, SWc 2-67s-29e, Monroe County, deep test, is drilling below 10,448 feet with no shows reported so far.

Dade County: Gulf Refining Company's State-Model Land Company 1, unsurveyed 60s-35e, 10,000-foot test, is drilling below 2868 feet.

Collier County: Humble Oil & Refining Company's Gulf Coast Realty Company 8, SW SE 19-48s-30e, Sunniland field, is drilling below 9910 feet. No shows have been reported.

☆ Rocky Mountain Area

Big Muddy Field, Wyoming, Is Given East Extension

Big Muddy field, Wyoming, has east extension; Continental's Shinarump strike, Rangely field, Colorado, overcomes mechanical difficulties and is being completed; Carter moving in for Uintah Basin test in Utah.

Wyoming

The Big Muddy field, discovered in 1916, has had an east extension in Dyer & Rice's Otis Barber 1, NW SW SE 3-33n-76w, Converse County. The well is a mile east of the nearest Dakota sand producer and flowed 50 barrels per day through open tubing on completion. It was drilled into the Lakota sand at 4459 feet, total depth, and that horizon had a

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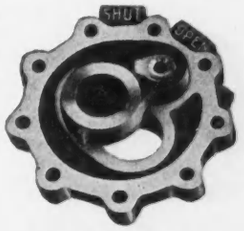

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show of oil with water so the well was plugged back and perforated opposite the Dakota between 4383-98 feet. In recent months Continental Oil Company, principal operator in Big Muddy proper, has completed 5 wells in the Dakota, all of which have been fair producers. Three more wells are scheduled in this zone for this year. The field has produced from the Frontier sand since its discovery, but development of the Dakota-Lakota zones has been within the past 2 years.

Colorado

Continental Oil Company's Shinarump discovery at Rangely, Rio Blanco County, which a week ago was having mechanical difficulties, has again started flowing and the well is being completed in that zone. This discovery was made at Dorothy Rooth 2, C SW SW 15-2n-103w, a month ago, but water from the Sundance sand broke through and a recement job was necessary. Liner was then run to bottom, and perforated, and the well swabbed until it started flowing July 23. On 24-hour test the well flowed 850 barrels of 38-gravity oil through ½-inch choke with casing pressure 410 pounds and tubing pressure 190 pounds. The Shinarump sand was topped at 6075 feet and the well is at 6110 feet, total depth. This is a major discovery for northwestern Colorado as the Shinarump section (Upper Triassic) has not been productive in any field in this region heretofore. The well is an outpost on the northwestern edge of the field. A south offset at Dorothy Rooth 4, C NW NW 22-2n-103w, will be started to the same zone immediately.

Routt County: Union Oil Company of California's test of the Beaver Creek structure at Crawford 1, NE NE SW 32-4n-89w, has drilled Dakota at 3289 and Morrison at 3415 feet, and is drilling below 3500 feet. The well will test Weber at around 6000 feet.

Montana

In its Maxwell Butte wildcat, Custer County, The Pure Oil Company's State 1, CWL SW SE 36-2n-51e, has cored porous lime between 7667-86 feet, but a drill-stem test showed fresh water. The well is drilling below 7730 feet. This is an important test on the east side of the state in an area that has had several deep tests with no results. The well is probably in Devonian at its present depth.

Utah

Following detailed seismic work, The Carter Oil Company is moving in for its test in the Uintah Basin at its Edna Davis 1, C NW NW 33-4s-20e, Uintah County, on the West Vernal structure. Carter has a unitized block of 57,000 acres in this area and the well will go to 6000 feet.

Caddo Granted Permit

Caddo Oil Company, Inc., Shreveport, has been granted a permit to operate in Texas. President of the firm is D. A. Raymond, Jr.; vice president is A. Stan Ross; and secretary is Melvin F. Johnson. All are of Shreveport. Raymond and Ross were organizers of the new firm. Raymond is a former independent operator, and Ross was for nine years a petroleum engineer with The Texas Company. Last week's issue of THE OIL WEEKLY stated incorrectly that Ross has been named Texas manager.

☆ Michigan

Objective Reached by Offset To Clare County Discovery

Now drilling below 4880 feet, Sohio Petroleum Company expected to start coring the Richfield at 5000 feet on the Buxton 1, N½ SE SE 13-17n-7w, southwest diagonal offset to The Pure Oil Company's Freer 1, 5070-foot gas-distillate discovery in Clare County. It is the first of 3 followup deep wells to reach the objective.

Completed for 26½ million cubic feet of gas and 100 barrels of 52-gravity condensate at the rate of 1 million cubic feet daily withdrawal, Pure's well is rated the most important deep development in Michigan for the year. The discovery has not been produced commercially to date due to delays in getting high pressure surface equipment on location and difficulties in preventing the well from flowing steadily because of a combination freezing and dehydrating action in the well.

Allegan County: Five rigs are running in the new Hawkhead shallow play in Casco township. First diagonal offset completion showed 500 feet of oil natural before acid. Discovery is making 100 barrels a day flowing from 1103-foot Traverse lime pay.

☆ Illinois Basin

Completion Near for Promising Wabash County, Illinois, Test

Completion near for extension to Friendsville pool, Wabash County, Illinois; Washington County wildcat tests oil; Richland County test completed for 728 barrels in 24 hours from McClosky; Omega dome has another failure; Carter tests promising McClosky show in Henderson County, Kentucky.

Illinois

George Engle's Guisewhite 1, SW SW SE 23-1n-13w, nearly a mile north of production in the Friendsville pool, Wabash County, pumped 80 barrels of oil in 11 hours as tests neared completion in McClosky lime at 2000-05 feet. The well was treated with 4000 gallons of acid. Operators continued tests.

Washington County: National Consumers Oil Company's Koelling-Pitchford 1, NW SW SE 10-2s-1w, 4 miles south of the Irvington pool, was testing 3 barrels of oil per hour from Cypress sand at 1520-30 feet. Operators were preparing to shoot.

White County: W. I. Lewis' Bingham 1, SW NW SW 17-5s-9e, ½ mile east of the Trumbull pool, swabbed 5 barrels of oil per hour from Aux Vases sand at 3165-75 feet.

Richland County: Largest completion recorded in the state for several weeks is Perry Fulk's Watson 1, SW NW SE 13-2n-9e, in the Calhoun-Gallagher pool. The well flowed 728 barrels of oil in 24 hours from McClosky lime.

Marion County: Latest failure on the Omega dome is Hensen's Warren 1, SW NE NW 24-3n-4e, which was drilled to 2805 feet without a show reported.

Coles County: S. H. and K. Drilling Company's Anna Strong 1, SE of C 22-12n-7e, has been temporarily abandoned after drilling a tight hole to the Devonian lime. It is unofficially reported that the well is non-productive in the Devonian and will be completed as a salt water disposal well.

Kentucky

The Carter Oil Company's Powell 1, 20-O-23, Henderson County, a mile north of Robards pool production, has set 7-inch pipe at 2650 feet for a test of promising McClosky lime, at 2463-70 feet and 2539-43 feet. During a 5-hour drill-stem test, the well made gas in 3 minutes and flowed oil for the last 4 hours.

Basin Drilling Company's Abbott 1, 10-T-22, ½ mile north of the Wilson pool, is opening a new producing horizon for the area. Well has pipe set to test Waltersburg sand at 1705-15 feet. During a drill-stem test the well made 400 feet of clean oil and no water. Present production in the area is from the McClosky lime.

☆ Ohio

Penfield Gets Large Gasser; Jackson Pool Has Extension

Second well in North Penfield is large gasser; gas extension in Jackson pool; attempt to extend Black Fork pool is failure; West Newton well is oil.

Lorain County: Ohio Fuel's Philip Bobel 2, Lot 48, Penfield township, 2000 feet east of the Bobel 1, the discovery well, came in and was tubed at 4⅓ million cubic feet natural. The Clinton sand lens, 2547-56 feet, carried over at the same thickness.

Ashland County: G. B. Harmon's Clarence Rogers 1, SW 4 Jackson township, ¾ mile north of his Hauenstein, came in at 1 million cubic feet natural. The Clinton sand had thinned down to 4 feet at 2885-89 feet.

Jackson County: Ohio Fuel's J. H. Pelfrey 1, SE NE 6, Madison township, an attempt to extend the Black Fork pool northeast, had no shows in the Clinton sand and the company will move the machine over into Jefferson township for a wildcat test.

Muskingum County: Atha's H. H. Roberts 3, NW NW 23, Newton township, a ¼-mile move north of the Roberts 2, drilled Clinton sand from 3370-3415 feet with good shows of oil and gas. After a 300-pound gelatin shot the well made 90 barrels of oil with ¼ million cubic feet of gas.

☆ California

Wildcats to Be Drilled Near Scenes of Early Development

Wildcats to be drilled in 2 North California counties near scenes of early oil development; Coles Levee completion good for 1200 barrels; discovery well near Los Angeles airport to be placed on pump; Boyle Heights test to spud soon.

Humboldt County: The Mattole River Valley, where oil seeps have been observed for years and where several shallow prospect holes have been drilled, is to be the scene of a new test by Yoturi Petroleum Corporation of Yakima,

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Wash. Location is in 21-2s-1w, about 20 miles south of The Texas Company's Tompkins Hill gas field and 7 miles southeast of Petrolia. Drilling will be in charge of Mathews and Clark of Los Angeles. Operators propose to drill to 1935 feet with rotary, cement casing, and drill into the expected formation to 2020 feet with cable tools.

Texas deep test for oil in the Tompkins Hill area is drilling and coring below 4340 feet.

Santa Cruz County: About 10 miles southeast of Moody's Gulch, where the first of several shallow producing wells was drilled 80 years ago, Bean Hill, Ltd., is drilling Hilns 2 in the Capitola area, 34-10s-1e. This operator drilled Hilns 1 early this year about 1200 feet east of the present try. The first well topped the Vaqueros shale at 2270 and was abandoned at 2575 on April 15.

Kern County: Richfield Oil Corporation has completed 34-34 at the east end of the Richfield Western field in 34-30s-25e, flowing 1200 barrels of 35-gravity oil through two 1½-inch chokes. Total depth is 9466 feet.

About a mile northwest of the McKittrick field, General Petroleum Corporation has staked Hall-Baker 66-4, a wildcat in 4-30s-21e.

Reserve Oil & Gas Company is preparing to drill a wildcat about 2 miles north of the Grapevine-Tejon field in 21-11n-19w.

Tide Water Associated Oil Company is abandoning Frick 22-16, wildcat in the Lamont area, 16-31s-29e. The hole is bottomed in sand and shale at 9261 feet.

Los Angeles County: Six Companies' Fee 1 in 2-3s-15w, near the Los Angeles airport, is moving out contractor's equipment and will be placed on the pump. A recent bailing test recovered 33 barrels of 14-gravity oil, cutting 8 percent. The source is fractured schist. While the well rates as a discovery, there is some doubt that any more wells will be drilled. The test well actually sought production in the conglomerate above the schist. Tests in the conglomerate produced only salt water, however.

Richfield has completed foundation for Boyle Community 1 in 31-1s-12w, just outside the eastern limits of Los Angeles in the Boyle Heights area. Richfield acquired the play from Boyle Royalties Corporation, which leased 3000 separate parcels in 40 community leases. About 1200 acres are involved. A zone variance to permit drilling was obtained from Los Angeles County. If production is obtained, several wells will be drilled from 1 location.

Richfield's Vail 2 in the East Los Angeles field was wet on a test of 7-inch casing cemented at 9200 feet. Chanslor-Canfield Midway Oil Company's test in this area is drilling in hard shale below 12,300 feet.

Orange County: Macoil Company has staked 8 wells in the West Newport Beach field. All are in 20-6s-10w.

Tests are continuing in the joint attempt of Basin Oil Company and Wilshire Oil Company to extend the Richfield oil field south. Stern 1 in 33-3s-9w, is bailing drilling fluid and some oil. Total depth is 4835 feet. Basin Oil Company is planning to drill a second well in the same area.

San Luis Obispo County: Paso Robles Petroleum Associates is preparing to drill a wildcat 6 miles northeast of Paso Robles. Operator is said to have 6000 acres under lease.

ARKANSAS WILDCATS

Bradley County—Failure: American Liberty Oil Co.'s Bradley Lbr. Co. 1, c ne ne sw 15-13s-19w, Nacatoch 3040, Eagle Mills 3765, no Smackover, abnd 5008.

Union County—Failure: Guy Mabee et al's Union Saw Mill 1, ne sw nw 31-18s-11w, Wilcox 1071, Midway 1360, Arkadelphia 2130, Nacatoch 2256, Saratoga 2410, base Chalk 2555, Travis Peak 2794, Cotton Valley 4036, Buckner 6338, Smackover li 6387, abnd 646.

CALIFORNIA WILDCATS

Kern County—Failures: Crestmont Oil Co.'s Blackfoot 7, 27-26s-28e, Mount Poso area, Vedder 1175, abnd 1500.

Hoke L. Woodward's H. W. 1, 17-26s-19e, Blackwells Corner area, abnd in shale 1375.

Santa Cruz County—Failure: Bean Hill's Hilns 1, 34-10s-1e, Capitola area, Miocene 1062, Vaqueros Shale 2270, abnd 2575.

Santa Barbara County—Failure: Union Oil Co.'s Escolle A-1, 28-9n-34w, Casmalia area, abnd 5850.

COLORADO NEW PAY TEST

Rio Blanco County—Rangely Discovery: Continental's Dorothy Rooth 2, c sw sw 15-2n-103w, Shinarump 6080, flow 35 bbls 38-gr oil per hr, td 6110.

ILLINOIS WILDCATS

Bond County—Failures: Walter Duncan et al's Root 1, se se ne 16-6n-4w, abnd 2735.

L. H. Horton's Rae 1, se se sw 6-16n-2w, abnd 1042.

Clay County—Failure: T. J. Hynes' Cunningham 1, se sw nw 33-3n-7e, abnd 2095.

Clinton County — Failure: H. Hubbard's Mahlandt 1, nw sw se 25-3n-3w, abnd 1680.

Coles County—Failure: N. A. Cummings' Harrah 1, se se se 27-12n-8e, abnd 2408.

Jasper County—Failures: J. W. Menhall's Short 1, ne sw ne 14-7n-10e, abnd 2694.

Superior's Schultz 1, sw sw sw 20-6n-8e, abnd 3122.

Jefferson County—Failure: T. J. Hynes' Sloot 1, ne se nw 6-1s-1e, abnd 2030.

Marion County—Failure: H. Miller's Coursen 1, sw sw sw 5-2n-2e, abnd 2200.

Saline County—Failure: W. P. Ford's McCue 1, ne nw ne 5-9s-7e, abnd 2957.

Shelby County—Failure: W. R. Britton's Kensil 1, sw sw nw 27-11n-4e, abnd 2040.

White County—Failure: Olson Drlg. Co.'s Renshaw 1, se se se 17-5s-9e, abnd 3430.

INDIANA WILDCATS

Fountain County—Failure: E. A. Riggs et al's Perigo 1, ne nw ne 4-18n-8w, abnd 1933.

Gibson County—Failure: H. C. Hageman's Mauck 2, ne se nw 3-2s-11w, abnd 2564.

Posey County—Failure: H. E. Ledbetter et al's French 1, nw nw sw 1-6s-14w, abnd 3054.

Sullivan County—Failure: Andros Gulde et al's Mahan 1, nw sw se 9-9n-8w, abnd 403.

Warrick County—Failure: J. E. McCauley's Beasley 1, nw nw 12-6s-8w, abnd 1065.

KANSAS WILDCATS

Cowley County—Failure: J. C. Trigg's Batdorf 1, sw sw nw 14-34s-7e, abnd 2986.

Ellis County—Failure: D. R. Lauck's Zorn 1, ne ne ne 1-17s-12w, abnd 3375.

Rooks County—Oil Discovery: Republic Nat. Gas Co.'s Cooper 1, c s½ se se 14-7s-20w, pump 18 bbls fr Arbuckle at 3498, td 3530.

MISSOURI WILDCATS

Atchison County — Failure: Dan Short's Griffin 2, ne ne nw 15-65n-40w, abnd 1385.

Cass County—Failure: T. M. Christie's Martensen 1, se se se 17-45n-33w, abnd 715.

KENTUCKY WILDCAT

Henderson County — Failure: C. Woods' Reichert Hrs. 2, 17-Q-22, abnd 2355.

SOUTH LOUISIANA WILDCATS

Cameron Parish—Failure: Claude F. Morgan's Arthur Murphy 1, 330 n&w of sec ne nw 31-14s-8w, Creole area, ¾ mi n Morgan's LeBlanc 1 dry hole, abnd 9520.

St. Bernard Parish—Failure: Texas Co.'s State-Chandeleur Sound 2, on State Lse 335 18,200 fr Well 1 dry hole, in Chandeleur Sound, abnd 11,837.

Terrebonne Parish — Failure: Texas Co.'s Continental Land & Fur Co. 1-A, 660 n&e of swc 10-18s-15e, 5½ mi s Gibson fld, jkd and abnd 11,649.

SOUTH LOUISIANA NEW PAY TEST

Terrebonne Parish—Dog Lake Deep Oil Discovery: Texas Co.'s State Lse. 12-5 Dog Lake Unit 200, 2494 s 3059 w of nec sect 1 in unit 12, 1-22s-15e, pay 9598, perf 9600-13, flow 200 bbls 37.3-gr oil, 0.1% wtr, ⅛-in, tp 1625 lbs, gor 1138/1, td 10,131.

MICHIGAN WILDCATS

Allegan County—Failure: R. T. Jones' Slotman 1, sw nw sw 28-3n-14w, abnd 1415.

Kent County—Failure: Michigan Consolidated's Medler 1, ne sw nw 10-10n-9w, abnd 1002.

Livingston County—Failure: Bridgeport Oil Co.'s Reyhl 1, ne sw sw 6-3n-4e, abnd 1260.

NEBRASKA WILDCAT

Sioux County—Failure: Amerada's Geyser 1, c sw ne 10-34n-54w, N. Ft. Robinson area, abnd 4561.

NEW MEXICO WILDCAT

Eddy County — Failure: Malco Refineries' Bynum 1, 1967 ewl 1953 snl 8-20s-25e, elev 3492, abnd 1318.

OKLAHOMA WILDCATS

Cotton County—Oil Discovery: Featherstone et al's Tunnell 1, nw nw nw 7-4s-10w, pump 150 bbls, Penn sand 1309-19, td 1319.

Cotton County—Failure: Bridwell Oil Co.'s Seward, c e nw ne 8-5s-10w, abnd 2153.

Creek County — Failure: Davis Brothers' Whitehead 1, ne ne sw 18-18n-8e, abnd 3095.

Garvin County — Failures: Mid-Continent Pet. Corp.'s Hart 1, se se se 23-3n-3w, abnd 7179.

Mid-Continent Pet.'s Menefee 1, se se se 2-4n-2w, abnd 7290.

Grant County — Failure: F. W. Gallery's Hajek 1, sw sw se 19-28n-4w, abnd 5318.

Lincoln County — Failure: Irvin Miller's Williams 1, ne sw nw 35-12n-6e, abnd 4705.

McIntosh County—Failure: Public Service Co.'s Link 1, se nw 10-10n-13e, abnd 4016.

Murray County — Failure: Helmerich & Payne's Veal 1, se se se 29-1n-2e, abnd 3005.

Okfuskee County — Gas Discovery: Loftis Drlg. Co.'s Kennedy 1, ne ne se 14-12n-9e, flow 7 mln gas, Hunton lime 3700-10, td 3710.

Okfuskee County—Failure: Wise, Douglas & Vierson's Dudgeon 1, ne ne ne 11-12n-10e, abnd 3594.

Payne County — Failure: Deep Rock Oil Corp.'s School Land 1, sw sw nw 16-18n-3e, abnd 4490.

Pottawatomie County—Oil Discovery: J. F.

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AMERICAN
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Smith et al's Klingensmith 1, sw sw se 23-8n-2e, pump 249 bbls fr Wilcox sand 5637-40, td 5640.

Pottawatomie County—Failure: Continental's Gilbreath 1, se se ne 3-8n-2e, abnd 5718.

Seminole County — Failure: Charles Mee's Spears 2, sw ne sw 19-6n-8e, abnd 1035.

Stephens County—Failure: Texas Co.'s Sadler 1, ne ne nw 11-2n-5w, abnd 1575.

WEST TEXAS WILDCATS

Crockett County—Failure: Ben Banner et al's Shannon 1, 6590 snl 6642 wel Lge 1, Archer CSL, elev 2505, abnd 2310.

Howard County—Failure: Duncan Dr. Co.'s Newton 1, ne ne ne T&P Ry. 9, blk 33, T-1-N, anhy 1080, salt 1180-1770, Yates grains 1810, Grayburg 2890, abnd 3222.

Pecos County—Failure: R. B. Rawlins et al's Codrz 1, 330 nsl 990 wel H&GN Ry. 101, blk 8, elev 2439, abnd 2040.

WEST TEXAS OUTPOST

Andrews County—Martin Failure: Atlantic's University 1-D-11 c ne nw sect 2, blk 11, 1-1/16 mi s of prod, elev 3319, Yates 2820, San Andres 4260, Simpson 8400, McKee 8740, Ellenburger 9050, abnd 9110.

WEST CENTRAL TEXAS WILDCATS

Callahan County—Failure: Boyd Gillespie et al's Windham 2, 750 wel 150 nsl BBB&C Ry. Co. 145, abnd 1168.

Jones County — Failure: Humble's Bishop 1-B, 467 out nec nw¼ T&P Ry. 22, blk 19, elev 1909, Noodle Creek lime 2577, Ellenburger 5394, abnd 5684.

Shackelford County—Failure: Dean Bros. et al's Newell 1-M 790 nsl 600 ewl GH&H Ry. 3, abnd 1447.

WEST CENTRAL TEXAS NEW PAY TEST

Taylor County—Murphree Deep Discovery: West Central Dr. Co.'s McElreath-Suggett & Harvey's C. H. Murphree 2, 1120 wel 990 nsl S.P. Ry. 1, blk 9, 1005 nw of Cook pay discovery, elev 1878, flow 306 bbls 41-gr natural, ¼-in, Hope perf 2706-10, td 2875.

EAST TEXAS WILDCAT

Hunt County—Failure: K. L. McHenry et al's Neely-Magnolia 1, 1334 snl 467 ewl of 75-ac lse, J. E. Clark sur, elev 536, Pecan 346, Gober 1132, base Austin 1843, Woodbine 2302, Buda 2949, Del Rio 2988, Georgetown 3072, Paluxy 3704, Glen Rose 4274, massive anhy 4663-4735, Travis Peak 5250, abnd 5347.

SOUTH CENTRAL TEXAS WILDCAT

Travis County—Failure: Clyde D. Lane's Union Central Life Ins. Co. 1, 330 fr sl 990 fr el 100-ac tr, Jacob Betts sur, abnd in Austin chalk 909.

SOUTH CENTRAL TEXAS NEW PAY TEST

Frio County—Pearsall Gas Extension: Highland Oil Co.'s Halff & Oppenheimer 12, 874 n of Well 3 940 fr nwl 1242-ac lse, 874 fr swl J. H. Gibson sur, perf new pay in Navarro 4273-79, flow 36 mln gas open, 1 bbl cond per mln, td 4335.

SOUTHWEST TEXAS WILDCATS

Duval County—Failure: Newman Bros. Drlg. Co.-Skinner & Eddy Corp.'s A. Weil et al 1, 330 fr ne&sel B. Elizondo sur 568, on 400-ac lse, 1½ mi s se Cedro Hill fld, abnd 2933.

Jim Hogg County—Failure: Texas Co.'s T. T. East 2-A, 990 fr nl 2310 fr el 330 fr wl blk 8, Don H. Marsh oil sbdn T. T. East lds, Simon de Ynoposa Gr, abnd 3600.

Starr County — Failure. Henshaw Bros.-Coastal Ref.'s Y. Sanchez 3, 1308 fr sly/sl 460 fr ely/wl sur 344 on 640-ac lse, 3½ mi e ne Margo fld, abnd 2661.

Webb County—Failures: D. J. Moss' J. O. Walker 2, 2290 fr el 1672½ fr sl GC&SF sur 264, 480-ac lse, 2 mi nw Carolina Texas fld, abnd 1732.

Westbrook Oil Corp.'s Mabel Adami 2, 2965 e of wl 2252 n of sl J. H. Gibson sur 337, 424.93-ac lse, 2 mi s Adami fld, abnd 1133.

Zapata County—Failure: T. B. Hoffer's Acela V. de Gomez 1, 3149 fr nwl 990 fr swl sh 3, Porc 31 & 32, 2 mi w Echols fld, Mateo Pena, abnd 2260.

LOWER TEXAS COAST WILDCAT

Bee County—Failure: W. C. McBride's State of Tex. 1, 330 fr ne&sel 298.2-ac Texas A&M College tr, Theodoro Molina sur, abnd 3618.

LOWER TEXAS COAST OUTPOST

Jackson County — Collier Failure: Easterwood Prod. Co. et al's Wm. Classen 1, 330 fr sel 3800 fr nel 2464.5-ac Classen tr on Farmout of 400-ac Sun lse, 3800 fr nel 3700 fr sel Jas. Kerr sur, 200 ne Sun's Classen 2 dry hole, abnd 2450.

UPPER TEXAS COAST WILDCATS

Chambers County — Failure: Kenneth D. Owens' W. L. Moody Jr. 1, 1094.4 fr wl 660 fr nl 282-ac lse, and G. W. Shelton sur, 1½ mi e se S. Mayes fld, abnd 10,020.

Ft. Bend County—Failures: Goldrus Drlg. Co.'s John Kostelnik 1, 450 fr swl 59.78-ac lse, and sect 36 C. Abendroth sur, 1½ mi n Needville prod, abnd 6369.

Jack W. Frazier-Cecil Hagen's C. H. Chernosky 1, 320 fr nw&swl 20-ac lse, out of Stanolind's 312.5-ac Chernosky tr, Barnabus Wickson sur, 1 mi s Big Crk prod, abnd 7225.

Wharton County—Hutchins Oil Discovery: Lake View Oil Co.'s J. E. J. Johnston 1, 396 fr nel 731 fr sel 150.66-ac lse, I&GN sur sect 15 & 22, pay 4515, perf 48 shots 4514-26, flow 126 bbls 24.3-gr, ⅛-in, gor 432/1, tp 500 lbs, td 5789.

NORTH TEXAS WILDCATS

Archer County—Failures: D. H. Bolin et al's Hamilton 1-A, 700 wel 1600 snl blk 5, I. Holeman sur, abnd 1358.

Clyde Gibson et al's Wilson-McCrory 1-B, 150 out nwc of e 20-ac lot 1, sect 59, ATNCL, abnd 1666.

W. B. Hamilton et al's Graham 1, 150 out sec of F. Gibenrath sur, abnd 1200.

K. R. March's Darilek 1, 1716 nsl 933 ewl sect 2410, TE&L So. sur, abnd 1434.

Harvey Dr. Co.'s Abercrombie 1-C, 1050 snl 1500 ewl S.P. Ry. 1, abnd 1472.

Cooke County—Failure: B. O. M. Oil Co.'s Hoenig 1, 1050 fr sel 2800 fr swl J. C. Morgan sur, abnd 1592.

Wilbarger County — Failure: Nat'l Assoc. Pet. Co.'s Lockett 1, sw se se H&TC Ry. 27, blk 9, elev 1292, Canyon 3580, abnd 4512.

NORTH TEXAS NEW PAY TEST

Jack County—Deep Pay Offsetting Shallow: Hanlon & Buchanan's J. Moore 1-B, 330 snl 1320 ewl ne¼ BBB&C Ry. 2, elev 941, Bend 4962, 2nd Bend 5012, Ellenburger 5890, pmp 11 bbls 41-gr, 6 bbls wtr, acid 4500 gals Ellenburger open hole 5985-6003.

WYOMING OUTPOST

Converse County—Big Muddy Oil Extension: Dyer & Rice's Otis Barber 1, nw sw se 3-33n-76w, 1 mi e of prod, Wall Creek 3110, Dakota 4365, Lakota 4448, flow 50 bbls, perf 4360-98, td 4459.

WESTERN CANADA WILDCATS

Central Alberta Plains—Elk Point Failure: Anglo Canadian-Home Oil-C. & E. Corp.'s Elk Point 1, lsd 7 26-56-5w4th, L. Cret. 1180, gas and oil shows in Devonian lime 1631, 3 salt beds in Devonian-Silurian 2775-3929, completed as salt well 3929.

West Viking Failure: Anglo Canadian-Home Oil-C. & E. Corp.'s West Viking 1, lsd 10 11-48-15w4th, L. Cret. 2550, abnd 3025.

Kansas Allowable Fixed

Kansas State Corporation Commission fixed the state's crude allowable for August at 270,000 barrels per day, unchanged from July.

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HOUSTON, TEXAS

WILDCAT STARTS

ALABAMA

Marengo County: Ballio & Trotter's Camillo B. Tutt 1, nw ne 32-14n-1e, lcn.

ARKANSAS

Nevada County: Barnsdall's Stuart 1, c sw se 12-14s-23w, 2 mi w 1 mi s Bodcaw prod. bldg rds for 5600-ft or Smackover test.

Union County: R. C. Wallingsford's Citizens Bank 1, (OWDD) c nw se nw 13-18s-13w, otd 2578, dr 2952.

CALIFORNIA

Kern County: L. S. Gilmour & Associates' Thornber 83, 14-30s-28e, Mt. View area, lcn.

Reserve O&G Co.'s 1-A-21, 21-11n-19w, Grapevine area, cellar.

Texas Co.'s Anderson 1, 20-29s-21e, Sheep Springs area, lcn.

Humboldt County: W. C. M. C. Oil Co.'s Mathew Clark 1, 21-1s-2w, Petrolia area, rur.

Santa Cruz County: Bean Hill's Hilns 1, 34-10s-1e, Capitola area, abandoning.

Bean Hill's Hilns 2, 34-10s-1e, Capitola area, dr.

Ventura County: Bankline Oil Co.'s Black 101, 13-4n-18w, Del Valle area, rig.

ILLINOIS

Bond County: L. H. Horton's Rae 1, se se sw 16-6n-2w, drlg.

J. H. Roberts et al's Baker 1, nw nw nw 17-6n-2w, lcn.

Cumberland County: Nat. Assoc. Pet. Co.'s Seegers 1, sw sw sw 2-9n-7e, drlg.

Hamilton County: Oetna Oil Co.'s Batchelder 1, se se nw 5-4s-7e, lcn.

Jasper County: J. W. Menhall's Short 1, ne sw ne 14-7n-10e, drlg.

Jefferson County: K. M. Bayer's Rainey 1, se ne sw 26-2s-2e, lcn.

Marion County: Hinson Drlg. Co.'s Warren 1, 24-3n-4e, drlg.

Perry County: A. J. Slagter, Jr.'s Coen 1, se ne se 4-6s-1w, drlg.

Richland County: J. S. Young, Jr.'s Highsmith Heirs 1, 4-2n-11w, lcn.

Joe Bauer et al's Brevoort 1, se ne sw 10-2n-11w, drlg.

Wayne County: Brinkerhoff Oil Co.'s Clevenger, sw se ne 7-1s-9e, lcn.

INDIANA

Fountain County: Western Indiana Pet. Corp.'s Young 1, 29-20n-8w, lcn.

Joseph County: Christ B. Demos' Hoog 1, c se se nw 15-37n-1w, lcn.

Miami County: Rich Valley Dev. Co.'s Horner 1, c se nw sl 3-27n-5e, lcn.

Spencer County: B. Pohl et al's Jolly 1, 15-6s-7w, lcn.

Sullivan County: W. E. Adams' Tennis 1, 36-9n-8w, lcn.

KANSAS

Norton County: Cities Service's Johnson E-1, ne se ne 35-4s-23w, lcn.

KENTUCKY

Henderson County: Carter Oil Co.'s Powell 1, 20-O-23, lcn.

Thorne Drlg. Co.'s Crafton 1, 16-Q-25, lcn.

Ohio County: Kingwood et al's Galey Minerals 1, 3-N-34, drlg.

Union County: Waller Chenault's Allaway 1, 23-M-19, drlg.

Webster County: George Morgan et al's Puryear 1, 20-N-23, drlg.

NORTH LOUISIANA

Red River Parish: Ray & Woold-J. C. Hawkins' R. A. Wilson 1, 2084 fr nl 1980 fr wl 4-14n-10w, Loggy Bayou area, Travis Peak test.

Richland Parish: J. A. Humphrey-J. C. Wynne's Mrs. M. D. Boughton 1, 2326 fr sl 1659 fr wl 1-15n-6e, 3600-ft test.

Homer Hurley-Davis & Demopulos' Singer Mfr. Co. 1, c nw nw 21-18n-9e, 6 mi n Delhi fld disc, rur 4000-ft test.

SOUTH LOUISIANA

Jeff Davis Parish: Stanolind et al's W. E. Walker 1, 330 n&w fr sec sw¼ sect 29, in 29-9s-5w, 1½ mi w of sly prod at Welsh Dome, 9500-ft Oligocene test.

St. Mary Parish: Humble's Ivanhoe-Gulf Coast 1, c se se 7-15s-7e, Cote Blanche Island area, lcn.

Terrebonne Parish: Atlantic's Realty Operators 1, 660 n&e of swc 33-17s-17e, 2 mi nw S. Houma gas-cond fld, 13,000-ft test.

Vermilion Parish: Francis A. Callery's Ella Simon 1, 35-11s-2e, 4 mi nw Abbeville fld, off s flk of Andrews Prospect, 11,000-ft test.

MICHIGAN

Lake County: Panhandle Eastern Pipe Line Co.'s Ichenberg 1, sw ne se 28-17n-11w, dr.

Mecosta County: Sohio's Stephenson 1, se nw ne 12-13n-10w, rig.

Oakland County: Hihkel Sherman's DeLinde 1, nw nw nw 21-4n-9e, lcn.

MISSISSIPPI

Newton County: Magnolia's State A-1, nw nw 16-5n-10e, lcn.

Smith County: Pan American's U. S. A. 1, nec 14-3n-7e, lcn.

MONTANA

Musselshell County: Clark Drlg. Co.'s N. P. R. R. 1, nw ne se 9-11n-24e, Devils Basin, lcn.

OHIO

Coshocton County: Benedum-Trees' John W. Lee 1, nw sw 16, Bedford Township, lcn.

OKLAHOMA

Beckham County: Four States Oil Co.'s Martin 1, nw nw sw 32-8n-24w, mit.

Carter County: Louell Drlg. Co.'s Champion 1, ne ne nw 25-4s-2e, ru.

Cotton County: Bridwell Oil Co.'s Healey 1, sw se nw 30-3s-10w, drlg 130.

Creek County: W. J. Sherry's Lanshley et al 1, se sw ne 20-16n-8e, drlg, 678.

J. Garfield Buell's Donaldson 1, sw ne sw 4-14n-8e, mit.

Gilespie & Sons' Gaasch 1, ne ne nw 22-14n-9e, c&p.

Hughes County: B. C. Deardorff's Gentry 1, nw nw ne 14-7n-9e, lcn.

Texas Co.'s Adams 1, nw nw sw 24-8n-9e, drlg 3542.

Cities Service's Thompson 1, sw nw sw 13-9n-11e, lcn.

Lincoln County: Hubble & Webb's Smith 1, se ne se 3-14n-6e, drlg 4075.

Carter's James 1, nw nw se 1-12n-5e, rur.

McCurtain County: H. W. Snowden et al's Morgan 1, se se se 25-9s-25e, rur.

Noble County: Eason et al's Boyes 1, se ne se 19-22n-1w, lcn.

Clark & Cowden Drlg. Co.'s Fee 1, se sw sw 32-21n-1w, drlg 5207.

Okmulgee County: Ryan Consolidated Pet. Co.'s Kimble 1, se sw nw 19-14n-11e, lcn.

Payne County: Jack White's Mitchell 1, se se nw 3-20n-2e, drlg, 4150.

Pontotoc County: Blackwell O&G Co.'s Smith 1, se sw nw 29-4n-8e, drlg 420.

Seminole County: E. L. & M. Drlg. Co.'s Bowles 1, nw nw se 9-6n-6e, drlg 2296.

Stephens County: Gilmer Oil Co.'s Creel 1, ne se nw 5-1s-5w, lcn.

Porter Oil Co.'s Rose 1, sw sw se 25-2n-6w, mit.

SOUTH DAKOTA

Fall River County: Amerada's Mary Voorhees 1, se ne sw 25-10s-8e, mir.

WEST TEXAS

Andrews County: Mabee O&G Co.'s J. E. Mabee 1-20, c nw nw G&MMB&A 20, blk 39, T-2-N, 1½ mi ne of Mabee fld, 5000-ft test.

Crane County: Gulf's University 1-HH, 1980 wel 2054 snl sect 3, blk 31, 10,000-ft Ellenburger obligation on 1600-ac blk.

Mitchell County: C. E. Beavers et al's S. R. Coleman 1, se se nw H&TC Ry. 70, blk 97, 3500-ft test.

Pecos County: Frank Brock et al's I. G. Yates 1, 990 snl 4500 ewl I&GN Ry. 72, blk 1, dr 250.

WEST CENTRAL TEXAS

Callahan County: Dean Bros. et al's J. D. Isenhower 1, 1155 out sec sect 9, Bayland Orphan Home sur, lcn.

Chas. E. Timm et al's Gaston Wiley 1, 800 snl 150 ewl TE&L Co. sect 2975, lcn.

NORTH TEXAS

Archer County: Clyde Gibson et al's L. F. Wilson-McCrory 2-A, 330 nsl 280 ewl sect 55, ATNCL sur, 1500-ft rotary test.

Harvey Dr. Co.'s C. L. Abercrombie 1-H, 1100 wel 2000 nsl blk 31, J. W. Harris sbdn, 1600-ft rotary test.

Harvey Dr. Co.'s C. L. Abercrombie 1-J, 1100 wel 1200 nsl blk 23, J. W. Harris sbdn, 1600-ft rotary test.

Harvey Dr. Co.'s Abercrombie 1-M, 1050 nsl 2000 wel blk 108, J. W. Harris sbdn, 1600-ft rotary test.

Cooke County: J. F. Hood et al's H. E. Hyman 1, 952 nsl 1515 ewl of O. R. Smith sur, 1900-ft rotary test.

Haskell County: Thos. D. Humphrey et al's W. C. Norton 1, 990 snl 330 wel blk 44, 4400 snl 4826 wel of James Scott sur 118, 3500-ft rotary test.

Jack County: Hanlon & Buchanan's Mrs. M. E. Munson 3, 233 sw of m/e/nel 860 se of m/e/nwl of T. C. Ry. sur, 700-ft cable test.

Montague County: Honolulu Oil Corp.'s D. A. Price 1, 317 s 2310 w of swc of John Short sur, but in Francis Escobar sur, 4500-ft rotary test.

Phillips' S. D. Howard-Alco Valve 1, 1080 fr swl 700 fr nwl of Guadalupe College sur, 6300-ft Bend test.

Young County: L. D. Terry et al's Mrs. May Shatto 1, 150 snl 1460 wel of s½ sect 1916, TE&L Co. sur, 700-ft cable test.

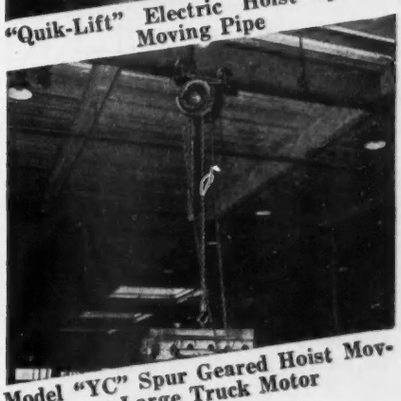
EAST TEXAS

Cherokee County: Delta Drlg. Co. et al's Southern Pine Lbr. Co. 1, 467 out sec of 37½-

Wherever COFFING HOISTS are installed there is a noticeable saving in manhours and manpower. New uses are being found daily in all kinds of plants and industry—whether it's production, construction or maintenance.

"Safety-Pull" Hoist Pulling Concrete Forms

"Quik-Lift" Electric Hoist speedily Moving Pipe



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COFFING HOIST COMPANY
Danville, Illinois, U. S. A.

The OIL WEEKLY'S TRADING POST

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FOR SALE

■ 5 Complete Reda Pumping Units. Cables like new. 75 and 97 H.P. Motors. Max Steinbuchel, 1905 Park Place, Wichita 4, Kansas. Phone 5-6082.

■ FOR SALE—Three 14" x 18" latest type Model 47 Fairbanks-Morse Horizontal twin cylinder Diesel Engines. 250 H.P. @ 300 RPM, 360 H.P. @ 400 RPM. These Engines are in good condition and mounted on steel skids. These are ideally suited for driving electric Generators, central lease pumping units, Gins, Stationary Plants of all descriptions and are very simple and economical to operate. Will sell worth the money. Contact Box 1881 or phone 2412, Midland, Texas.

■ FOR SALE: 10 Ton New White Truck, Model 1064, 6 x 4 Drive, 11 x 24 Tires, Cummins Diesel H.B 600 Motor. B. & R. Transportation Co., 700 E. 6th St., Ft. Worth 3, Texas.

■ FOR SALE: 19 Shot Hole Drills, all working on good contracts; drills built since 1940. Excellent personnel. Box 51, c/o Oil Weekly, Houston, Texas.

■ FOR SALE: Spudder with tools and lines good for 1,500 feet deep. Write W. R. Stoll, R. R. No. 4, Upper Sandusky, Ohio.

■ FOR SALE: Special shop built portable drilling rig, mounted on 1943 GMC 2½ ton, 6 x 6 truck, suitable for oil drilling or deep water well to a depth of 3000 feet. All new equipment. One 1942 Chevrolet 1½ ton, 4 x 4 water truck, with winch. Address: P. O. Box 568, Conroe, Texas. Phone 241.

■ FOR SALE: Model C-1 Frost Gravity Meter, slightly used, just put in new condition by manufacturer. Write Box 53, c/o Oil Weekly, Houston, Texas, or telephone L-6-6618, Dallas, Texas.

■ 1 Mac BX Tandem truck with Oil Field Bed & Tulsa Winch, in good condition. Suitable for mounting oil field rig. U. S. Truck Line, Woodcrest 6-8808.

FOR SALE

50— 500 Barrels
10— 1,000 Barrels
20— 5,000 Barrels
4—10,000 Barrels

Heavy A.P.I. New closed bolted type steel tanks now located at Ogden, Utah. Can quote reasonable prices in order to move from present premises at once.

JOS. GREENSPON'S SON PIPE CORP.
National Stock Yards, St. Clair County, Ill.

It's New . . . Check It!

PIPE GRINDING MACHINE designed and built to give pipe line contractors maximum service in polishing the bevel on plain end pipe in preparation for welding. The machine can be placed on pipe easily and quickly, and will clean the bevel on 24-inch pipe in 15 seconds, whereas a man with file would have to work at least 15 minutes. The grinder is constructed for durability, light weight, effectiveness and economy. Electrically driven, it may be operated from electric welding machines on the line.

The Machine was perfected, and now being manufactured by Wichita Tool Repair Co., of Wichita Falls, Texas, under License from O. R. Hall, Inventor.

SITUATION WANTED

■ DRILLING AND PRODUCTION SUPT.: Age 44, 27 years experience in drilling and production operations. 22 years supervisory experience in drilling (Rotary and Cable tools), completions, production developments, workover operations and flush and stripper production. References if desired. Address: Box 32, c/o The Oil Weekly, Houston, Texas.

■ VETERAN WORLD WAR II: Desire Oil Company or Oil Field Supply connection. 12 years field experience in various departments. Age 43 years. c/o Box 52, The Oil Weekly, Houston, Texas.

HELP WANTED

SALES MANAGER

Independent Oil Company

RETAIL MARKETING

Houston Area

Capable of handling small sales force

Box 47, c/o The Oil Weekly, Houston, Texas

■ DESIGN ENGINEER desired by leading oil field equipment manufacturer. Need mechanical engineering background and experience. Knowledge of oil field equipment desirable. Permanent position with opportunity for advancement. Other positions open in engineering department. Our employees know of this ad. Give background and experience first letter. Write Box 50, The Oil Weekly, Houston, Texas.

DISTRICT GEOLOGIST
EASTERN VENEZUELA

College Graduate in Geology. 8 to 10 years' experience, preferably several years supervising Geologic aspects of Wildcat and Field development wells. Foreign experience and Spanish desirable. Write to: The Atlantic Refining Co., Room 900, Box 7258, Phila. 1, Pa.

SERVICES

■ Manufacturer's agents, with technical experience, desiring additional accounts with drilling contractor contacts to sell oil drilling tools in various areas of Texas, Louisiana, New Mexico, southern Kansas, Oklahoma, references. For details address Box 34, c/o The Oil Weekly, Houston, Texas.

LEASES, DRILLING, ACREAGE, ETC.

■ Drilling contractor wants acreage proposition or farm-out in Permian Basin. Must have merits. Contractor, Box 1549, Odessa, Texas.

FOR RENT

POWER PUMP

New 5 x 10 FXO Gardner Denver powered with new Waku Motor

JACK KNIFE DERRICK

126 Foot Lee C. Moore

FOR RENT

EARLE ADKISON

Box 814 Houston Fairfax 9339

ac tr, 2000 wel 7250 nsl Z. Gibbs sur, Woodbine test.

Robertson County: United North & South Development Co.'s Dr. Hooper Rch Co. 1, 930 fr nel 1150 fr nwl of 320-ac tr R. Copeland sur, 2 mi nw Easterly, 6000-ft Edwards test.

SOUTH CENTRAL TEXAS

Frio County: Geo. W. Strake-Warren Pet. Co.-Wiegand Drlg. Co.'s Grace Cowden Henry 2, 467 w of el 4600 s fr n cor 3548-ac lse, 5300 fr nel 4100 fr nwl A. Petra de la Pena sur 153, drlg 1100 on 4000-ft test.

Milam County: Trans-Gulf Co.'s Lena Fick 1, 330 fr wly/wl 1400 fr nl 40-ac lse, J. J. Acosta sur, near Sharp, lcn.

Travis County: Ollie Caffey's Alfred Carlson 1, 1070 fr nl 525 fr el 80-ac lse, L. Kimbro sur, lcn.

Williamson County: Sam Michalk's Albert Patschke 1, 660 fr swl 330 fr sel 127-ac tr, 500 fr nel 1400 fr sel Jessie White sur, spud on 1500-ft test.

SOUTHWEST TEXAS

Duval County: H. H. Howell's Lizzie Singer 3, 330 fr el 1670 fr nl G. Cumberland sur 4, 330 fr el 3035 fr nl 785-ac lse, Phalangana Dome, 5500-ft test.

LOWER TEXAS COAST

Bee County: Fred W. Shield-Allen & Morris' Winona H. Brinkoeter 1, 467 fr se&swl lse, 4920 fr nwl 3050 fr nely/nel G. Pagen sur, 6500 sw Burnell-Wilcox prod, mi for Wilcox test.

San Patricio County: Claud E. Hamill's Ruth P. Sweatt et vir 1, 330 fr n&el s½ sect 7 on 440-ac lse, 2 mi e se Taft fld, mir 5600-ft test.

Jones & Morgan's W. E. Runge 1, 330 fr wl 1100 fr nl 78.25-ac tr, lot 25 of sbdn in John Pollan sur, 7500 sw oil prod 5000 s sw gas prod at W. Sinton, 7000-ft test.

UPPER TEXAS COAST

Brazoria County: Humble's Pledger Gas Unit 2-1, 660 fr nel lot 45 660 fr sel lot 46, in 360-ac lse, D. Shipman & I. N. Charles sur, Pierce sbdn, 7900 w of Humble's Carter 1, n gas extension, lcn.

Newton County: Humble's E. P. Hughes et al 1, 572 fr nl 454 fr wl 417 fr el Hughes et al 18.05-ac tr on 40-ac unit, W. H. Stark sur, Bon Wier area, 9500-ft Wilcox test.

UTAH

Uintah County: Carter Oil Co.'s Edna Davis 1, c nw nw 33-4s-20e, West Vernal area, 6000-ft test.

WEST VIRGINIA

Greenbrier County: Texas Co.'s No. 1, G. R. Dean farm, Williamsburg district, drlg 1909.

Water Flooding Approved

The Arkansas Oil and Gas Commission approved a water flood program for the Pettit lime zone pool of the Haynesville extension and authorized the Haynesville Operators Committee to continue experimental water injection now in progress and to undertake a full scale program if the experiments prove successful.

Hawkins Allocation

A continuation of the present method of allocating allowables in the Hawkins field of Wood County, Texas, was ordered by the Texas Railroad Commission. The provisions of the rule will remain in effect under the new order until the present litigation over the formula is settled by the Texas Supreme Court.

Humble Oil & Refining Company brought suit against the Texas Railroad Commission to correct alleged inequities in the allocation method.

ADVERTISING RATES

TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, takes flat-rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for the first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, The Oil Weekly
P. O. Box 2608 Houston 1, Texas

SQUEAKS from the BULL WHEEL

Hints for Householders

"Hey, Pop! Whatcha doin' kissin' the maid?"

"Bring me my glasses, son. I thought it was your mother."

The After-Life

"Daughter, I hope that's a nice book you're reading."

"It is, mother, except it's so sad at the end. The girl dies and he has to go back to his wife."

Heel and Well-Heeled

"Remember, darling, last night you said there was something about me you could love?"

"Yeah, but you spent it all."

Asked for It

"Sir, your daughter has promised to marry me."

"Well, don't come whining around me for sympathy. I knew it would happen if you kept hanging around here."

Poet's Nook

Get early to couches
Grab lots of sleeps
And you'll never have pouches
Under your peeps.

Encore

Here lies a jitterburg,
Young, expired.
Ain't gone to heaven yet—
Too darned tired.

This Curious World

The best way to forget all your other troubles is to wear a pair of tight shoes.

Some girls give all to love and others give love to all.

Trouble with people who drink like a fish is that they don't drink what a fish does.

They call her boy friend Pilgrim because each night he makes a little progress.

Most people don't call a man a bad egg until he's broke.

Pays to Be Sure

Paging Mr. Sleidopavrikanowskytotivitch. Is that you, sir?"

"Might be. What initials?"

Buyer's Strike

"Papa, there's a woman peddler at the door."

"Tell him to beat it. I got one too many already."

Travel Broadens the Mind

"Do you always take the other girls for such long rides?"

"Nope, it isn't always necessary."

For Bachelors Only

The moon was a yellow pumpkin in a diamond-studded sky. The night was soft and scented. She sat very close to him and waited for him to speak.

"Darling, dearest," he began, "there are quite a lot of advantages in living alone, but there comes a time when one longs for perfect understanding companionship. There is an overwhelming need for one whom one can treat as one's absolute property; who will be kind and faithful when times are hard; who will share one's joy and sorrows—"

To his delight, she gave forth with a delighted smile and nodded in agreement. "So you're thinking of buying a dog? Oh, do let me help you choose one"!

Bringing Up Mama

"Is your son's college education of any real value?"

"Yes, indeed. It has cured his mother of bragging about him."

Standco
NO-SMOKE

STANDCO BRAKE LINING

Is the driller's best friend because it makes the easiest brake known and "feeds off" evenly while drilling. It never scores brake rims. See page 2808 Composite Catalog.

Standco Brake Lining Co.
HOUSTON

THE FORT WORTH LABORATORIES

Analysis of oil field brines, cores, gas, oil and minerals. Field gas testing. R. H. Fash, Vice President; Long Distance 138 823½ Monroe Street, Fort Worth, Texas

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Oil Field Brines, Waters and Cores
Complete Evaluation of Crude Oils

Long Distance 267 Box 132, Houston, Tex.

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SHREVEPORT, LOUISIANA

"Best Bet Yet"

SUCKER RODS WIPED CLEAN

Here's a compact Sucker Rod Wiper designed as Well Pullers wanted it. Short overall height, 4", just right height for wrenching rods. Weight complete, only 29#. Easy to handle, comes mounted on pony rod ready to be used. Tough, natural rubber wiping webs squeegee rod, box and square free of oil. No oil leaves hole or flips on crew... Rubbers stand enough pressure to take oil to tank or sump if well flows. Wipes any size rod, ⅝" to 1¼".

Duo-Wipe style, code: SUBZONE, shown above, has two wiping elements. Quadra-Wipe Style, code: SUBSOLAR, has four rubbers for use with extra-low gravity oil. Both styles make up on standard tubing sizes at the well head.

Cut-away drawing shows sturdy construction. Handy Table Plate Head, available for both models, holds rod tools and elevators.

Write for Catalog No. 310

Specify
PATTERSON-BALLAGH
A DIVISION OF BYRON JACKSON CO.
"Best Bet Yet"

SUCKER ROD WIPERS

1900 E. 65th Street, Los Angeles 1
6247 Navigation Blvd., Houston 11
92 Liberty St., New York 6
210 Post St., San Francisco 8

MEN IN THE INDUSTRY NEWS

Howard C. King, comptroller of The Ohio Oil Company, has been elected to the board of directors to replace **Frank A. Billstone,** director and treasurer, who has retired after more than 42 years of service. **Charles H. Smith** will succeed Billstone as treasurer. Billstone, starting as a clerk in 1904, was made treasurer in 1927 and elected a director in 1934. King entered the employ of the company in 1921 and rose from clerk to head of the production department. He was made assistant treasurer in 1930 and comptroller in 1941, when that office was established. Smith, now treasurer, started with Ohio in 1906. He transferred to The Illinois Pipe Line Company in 1915, becoming assistant treasurer, and returned to the parent company in 1928 as assistant treasurer.

Howard C. King

Frank A. Billstone

Charles H. Smith

M. O. Rife, Fort Worth division superintendent of production for Gulf Oil Corporation and an employe for 42 years of the company and its predecessor, the J. M. Guffey Interests, was retired August 1. He was honored by officials of the company and coworkers at a dinner July 27, which was his sixty-fifth birthday.

»

J. B. Galbraith, comptroller of Stanolind Oil & Gas Company, Tulsa, was elected a director of the Tulsa Chapter of the National Association of Cost Accountants and was appointed chairman of the membership committee, succeeding **Leggus C. Island.**

»

W. Earle Shamblin has been named district geologist for Deep Rock Oil Corporation at Shreveport, following his resignation from a similar position with Devonian Oil Company.

»

John Clay and **R. E. Johnston** have organized the Justrite Drilling Company with headquarters at Evansville, Ind.

»

Ben W. Ploch has joined the geological department of Skelly Oil Company at Evansville, Ind.

»

Hamlet S. Harmon has been appointed scout in the Rocky Mountain division for Standard Oil Company of Indiana, with headquarters in Casper, Wyo. **Donald R. Ryan** is scout in charge of the division and is also located at Casper. Harmon formerly was assistant scout for the Stanolind Oil Purchasing Company in Wichita Falls, Texas.

E. D. Cumming, Shell Oil Company's vice president in charge at Los Angeles, who started as a fireman in Long Beach, 23 years ago, will take on an assignment of international importance in London

S. F. Bowlby

E. D. Cumming

next month. He will be succeeded by **S. F. Bowlby,** former assistant production manager in Los Angeles. Bowlby started as an assistant engineer in the Texas oil fields 20 years ago.

»

Col. James Boyd has been appointed dean of the faculty of the Colorado School of Mines. During his recent Army service he directed industrial operations in the American zone of German occupation as a deputy to **Lt. Gen. Lucius D. Clay,** and represented the U. S. in the four-power negotiations regarding the status of industry in Germany after the withdrawal of reparations. He was an associate professor in the department of geology at the Colorado School of Mines until 1940, when he took a leave of absence to become chief of the metals office in the office of the undersecretary of war.

»

Gerald E. Eddy, of Lansing, Mich., mining geologist with the State Geological Survey, has been named state geologist of Michigan to succeed Dr. R. A. Smith, retired. Eddy, 38, a graduate of Michigan State College, joined the survey in 1933 and was in the oil and gas branch for three years. From 1936 to 1942, when he entered military service, he served in the mining division.

»

R. P. Lambert, general auditor of Mid-Continent Petroleum Corporation since January 1, 1938, has been elected assistant secretary and assistant treasurer of the company. Lambert has been with Mid-Continent and its predecessor, Cosden & Company, for 30 years. He joined Cosden in 1916 and went to Tulsa from Pittsburgh at that time. During his 30 years Lambert has held various positions in the accounting and treasury departments of the organization.

R. P. Lambert

Gotkool
WATER CANS
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GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . .
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H. P. GOTT MFG. CO.
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KEEP PURE DRINKING WATER ALWAYS HANDY

J. G. Campbell will head the new department of economics and statistics of Shell Oil Company in New York. The department will conduct general and specific research in the field of economics for management's guidance, will correlate, analyze and interpret the statistical, financial and operating reports and data of the various operating departments, and will advise and assist other departments on economic and statistical matters. Campbell joined Shell in 1941, after five years as manager of the statistical department of Joseph Walker & Sons. He has been secretary of Shell's crude oil supply committee and employment representative for college graduates. He worked in personnel prior to his present appointment.

J. G. Campbell

»

W. M. Roberts has been named manager of Standard Oil Company of California's labor relations department. Roberts joined Standard in 1919 and has been engaged in employe relations work for 12 years.

»

Ray P. Walters has returned from Roumania. He was chief geologist for the Romano-Americana in Ploesti before the war and went to Roumania after the armistice as petroleum attache with the American Mission.

»

V. E. Middlebrook is manager of the natural gas-gasoline division of the Mid-Continent area for Shell Oil Company. The division was set up as a separate department July 1. **J. W. Cowles,** former head of the division, will act in an advisory capacity pending his retirement. Middlebrook joined Shell in 1937.

»

C. D. Alworth, manager of the production department of Standard Oil Company, S.A., Argentina, will return to his post in Buenos Aires about the middle of August, following a several months combined business and vacation trip to the United States.

»

Everett B. Evleth, president of Ray Control Company, Pasadena, Calif., and formerly vice president and general manager for Brown Instrument Company, is pictured here. Due to an error in composition, an item about Evleth in last week's issue of THE OIL WEEKLY included the photo of another man, for which we offer our apologies.

Everett B. Evleth

Col. D. W. Spurlock of Shreveport, a veteran of more than 30 years with the Standard Oil Company of Louisiana, has been awarded the Legion of Merit for outstanding achievements as executive officer and assistant to the chief of the Fuels Branch, Production Division, Army Service Forces, and assistant to director, Fuels and Lubricants Divisions, Office of the Quartermaster General. Present at the ceremonies in Washington were members of Congress, government officials and high military officers.

Robert W. Ward has been elected a vice president of American Car and Foundry Company and placed in charge of manufacturing. He was previously district manager of the Huntington, W. Va., plant. **W. E. Lunger,** general superintendent of the Huntington plant, has been appointed its district manager.

»

Melvin Shaulis has been appointed assistant superintendent of the Brier Hill blooming and round mills of The Youngstown Sheet and Tube Company at Youngstown. He joined Sheet and Tube in 1933.

REPLACEABLE SEATS

For Longer Service and Greater Value, Goode 6000 Lb. Test Unions Have Replaceable Bronze Seats.

Old Seats May Be Removed and New Ones Installed in Any Machine Shop.

In addition to replaceable seats, Goode 6000 lb. test unions give other important advantages. Double seals . . . two sealing points in each seat . . . double the service life and give double security. Three wing lugs provide faster make-up and break-out. Furnished in sizes from 2" through 4" with bronze seats; 1", 1¼", 1½", 6", 8", 10" with steel seats, for working pressures to 3000 p.s.i. Other Goode "Double Seal" Unions are available for working pressures from 500 to 5000 p.s.i.

Sold through supply stores everywhere.

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Export Representative: HUNT EXPORT COMPANY, 19 Rector Street, New York, N. Y.; Avda. Roque Saenz Pena 832 Buenos Aires, Argentina.

California Distributor: BETTIS RUBBER CO., LTD., 1557 So. Esperanza, Los Angeles, California.

GOODE EQUIPMENT CO., Inc.
1419 Carr Street Capitol 6338
HOUSTON, TEXAS

Earle M. Daniels

Earle M. Daniels, sales manager of the Hydril Company for the past 10 years, has been named vice president of the company. Daniels will divide his time between the Houston and Los Angeles offices.

Forest S. Burtch will succeed **Earl N. Graf,** resigned, as manager of sales, wire rope division, and **William Hobbs, Jr.,** becomes manager of sales, aircord division, of John A. Roebling's Sons Company, Trenton, N. J. Burtch has been with the wire rope engineering division since 1923, and was until his recent promotion manager of the aircord division of the company.

»

Tom Hallinan has rejoined E. D. Bullard Company, manufacturers and distributors of industrial safety equipment, as sales representative in the company's Los Angeles office.

»

Charles R. Cox has become president of Carnegie-Illinois Steel Corporation, United States Steel Corporation subsidiary, succeeding **J. Lester Perry,** who has been made assistant to the president, **Benjamin F. Fairless,** of the parent company. Cox has been president of National Tube Company since 1943, rising through executive positions since joining the company in 1934. Perry started out as a steel plant clerk in 1899, became vice president in charge of operations in 1933 and 2 years later was appointed president of Tennessee Coal, Iron and Railroad Company, another U. S. Steel subsidiary. He became president of Carnegie-Illinois in 1938.

J. Lester Perry

Charles R. Cox

LYKES BROS. STEAMSHIP CO., INC.

OWNERS AND OPERATORS AMERICAN FLAG VESSELS

Service from U. S. Gulf ports, the natural gateways for the oil and oil well equipment industries of the Midcontinent and Gulf Coast areas.

Serving the oil industry and its allied industries with dry cargo transportation to important oil producing, refining and consuming areas.

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LYKES WEST COAST SO. AMERICA LINE

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LYKES CONTINENT LINE

La Havre, Antwerp, Rotterdam, Gothenburg, Copenhagen, Stockholm, Malmo, Abo

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Lykes offers regular sailings from Houston and Galveston, the natural ports of exit for oil well supplies—oil field equipment—oil refinery requirements for Venezuela, Curacao, Aruba and East Coast Colombia and sailings from Houston and New Orleans to West Coast Colombia, Ecuador, Peru and Chile.

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Ship Via Gulf Ports!

Deaths

O. H. Shoup, Jr., vice president and director of the Bace Oil Company, died July 25 in Wichita, Kansas, after a long illness. He was the son of a former governor of Colorado. After serving in World War I as a captain he became associated with the oil industry in Texas and California and went to Kansas in 1936.

»

Harry V. LeBourveau, 53, plant manager of Shell Oil Company, Sewaren, N. J., since 1943, died July 8 at Staten Island after an illness of several months. Upon completing the engineering course at St. Laurent College, Montreal, Canada, he worked from 1917-1929 in South America, rising to field superintendent of construction and drilling and ultimately becoming chief engineer.

»

William O. Alkire, 60, West Texas-New Mexico district production superintendent for the Amerada Petroleum Corporation and an employe for 23½ years, died July 26 at Midland, Texas.

»

Jack W. Mooney, 64, Ranger, Texas, district foreman for Sinclair Refining Company, pipe line division, died July 28 at Ranger.

»

George O. Busby, 62, assistant purchasing agent for Gulf Oil Company in Houston, died July 30. He joined the company in 1906 as a general stockroom keeper, and resided in Houston for 40 years.

Dowell Incorporated Announces Changes in Sales Personnel

Dowell Incorporated, subsidiary of The Dow Chemical Company, through General Sales Manager R. D. Shaw, has announced some changes in the Dowell sales staff that have become necessary due to the rapidly expanding activities of Dowell's petroleum and industrial divisions.

H. W. Ross

H. W. Ross, formerly assistant sales manager, becomes sales manager in charge of the industrial division, which is primarily concerned with the removal of various types of scale and sludges from all types of industrial heat exchange equipment. Ross will continue to maintain certain activities in the petroleum division.

Guy Williams

M. L. Stirling

M. L. Stirling, formerly assistant sales manager, becomes sales manager of the petroleum division and will direct sales of Dowell's oil field services, including oil and gas well acidizing, plastics, water locating, electric pilot and cementing services that are so widely used in well completion and work over operations.

Guy Williams, who has been attached to Dowell's sales department for many years, will become assistant sales manager in charge of product sales including Dowell Paraffin Solvent, Jelflake and Jelfoam. He will also be active in general sales promotion in both the industrial and petroleum divisions.

Jones & Laughlin Supply Opens Stores at Denver and Amarillo

Jones & Laughlin Supply Company has opened two offices. One is in the Continental Oil Building, Denver, with Carleton Clymer in charge and operating as a unit of the Rocky Mountain District under supervision of M. A. Park, district sales manager at Casper, Wyo. The other is at Amarillo, Texas, in the Rule Building, and is in charge of H. U. Everett, appointed district sales manager for the newly-created Panhandle District of Texas, Oklahoma, and Southwestern Kansas. He was transferred from Tulsa.

Other personnel changes announced by the company: G. Z. Brock was appointed store manager at Cushing, Okla., succeeding H. L. Ottinger, and R. P. Conley was transferred to Cushing from Oklahoma City as store salesman. R. D. Best is successor to Glenn Whitaker as store manager at Best, Texas, the latter being transferred to Casper, as store manager. Ivan A. Jones was also transferred to Casper as field salesman, from Hutchinson, Kan. C. A. Stoll is the new store manager at Bradford, Penn. D. L. McKee was appointed store manager at Canton, Ohio, replacing Forrest McAdams, now devoting his full time to sales activities. J. G. Rose was made a salesman at Kilgore, Texas. E. R. Stice, recently returned from the Navy, was appointed field salesman at Odessa, Texas.

District Office at New Orleans To Be Established by Youngstown

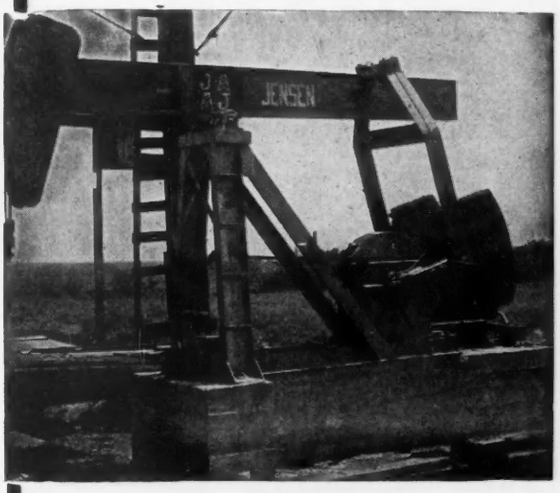
A district office will be established August 1 at New Orleans by The Youngstown Steel Products Company which represents The Youngstown Sheet and Tube Company, Walter E. Watson, vice president of The Youngstown Sheet and Tube Company, has announced.

New Orleans formerly was a sub office under Atlanta. The office is in the Whitney Building.

O. B. Ewing, who has been in charge of the New Orleans office, becomes district sales manager for that area.

HERE'S AN

INVITATION . . .



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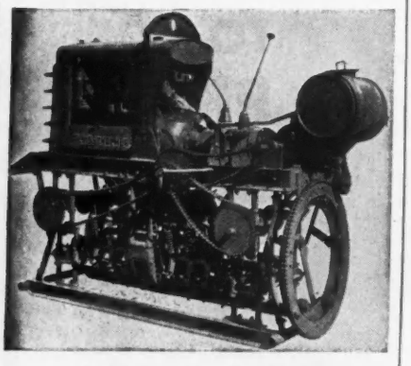

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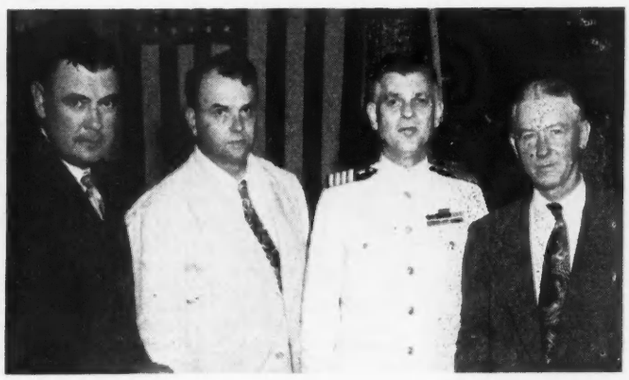
Cameron Receives Naval Award



Prominent in the Cameron Iron Works observance were, left to right, Ralph McCullough, secretary and treasurer of the company; Herbert Allen, vice president in charge of engineering and manufacturing; Capt. A. D. Blackledge, administrative officer, U. S. Naval Gun Factory; and Edmond L. Lorehn, vice president and general manager of Cameron Iron Works, Inc.

Cameron Observes 25th Anniversary; 162 Employes and Officials Honored

Cameron Iron Works, Inc. of Houston and 15 of its officials and employes received the Navy Ordnance Award July 22 for development and production of naval ordnance during the war.

The company also made a delayed observance of its 25th anniversary in business, at which time 162 employes and officers were presented lapel pins in recognition of 5, 10, 15, 20 and 25 years of service.

The awards for exceptional and meritorious service rendered to the United States Navy during World War II were presented by Capt. A. D. Blackledge, administrative officer for the United States Naval gun factory, Navy Bureau of Ordnance.

Captain Blackledge was introduced by Herbert Allen, vice president in charge of engineering and manufacturing, who recounted the steps traversed by Cameron Iron Works in gaining the Navy ordnance contracts.

On behalf of J. S. Abercrombie, president of Cameron Iron Works, Ralph McCullough, secretary and treasurer, received from Captain Blackledge the award presented to the company and to Abercrombie.

Navy ordnance certificates were presented by Captain Blackledge to Herbert Allen; Madden T. Works, chief engineer; S. E. Haggard, research engineer during the war; and R. N. Bean, development engineer. These men also received Navy Ordnance lapel pins, signifying meritorious work done by them as individuals in the interest of the nation's war effort.

Other Cameron officers and employes to receive the lapel pins were Edmond L. Lorehn, vice president and general manager; Gene Haggard, Ivy M. Teleschow, Gerald R. Mitchell, Marvin Jones, Reid Hodgson, L. J. Kerley, Ernest Peel, Charles W. Hughes, Jr., and Leonard Robertson.

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